

## A checklist of the barnacles (Cirripedia: Thoracica) of Singapore and neighbouring waters

Diana S. Jones & Andrew M. Hosie

**Abstract.** A checklist of the barnacles (Cirripedia: Thoracica) of Singapore and its neighbouring waters is presented. Currently 48 species are recognised from Singaporean waters. Singapore is the type locality for three genera (*Hoekia* Ross & Newman, 1973; *Nobia* Sowerby, 1823; and *Savignium* Leach, 1825) and four species – *Tetraclita singaporensis* Chan, Tsang & Chu, 2007; *Hoekia monticulariae* (Gray, 1831); *Nobia grandis* Sowerby, 1839; and *Savignium crenatum* (Sowerby, 1823). Species specifically recorded in Singaporean waters are marked and the locality Singapore is noted in bold type in the distribution data. Species not specifically recorded from Singaporean waters but whose presently recorded distributions encompass them are also included in the checklist. The checklist accommodates contemporary information, such as cladistic, molecular, ontogenetic, larval, ecological and phylogeographic data, as well as recent revisions and new species records of intertidal, shallow water and deep water species. Additionally, it also provides information on type species and details of specific hosts where applicable. The checklist and its comprehensive bibliography will inform future workers, aid identification of barnacle species and allow the thoracican cirripede fauna of Singapore to be considered in a broader regional context.

**Key words.** Checklist, barnacles, Singapore, regional context

### INTRODUCTION

A checklist of the barnacles (Cirripedia: Thoracica) of Singapore and its neighbouring waters is presented herein. Neighbouring waters are defined as those of Indonesia, Malaysia, Thailand, Vietnam and China (i.e., excluding Taiwan, Japan and the Philippines). Currently 48 species are recognised from Singaporean waters (Table 1). A record of *Newmanella* sp. from Singapore (S. Teo, pers. comm.) has not been included in the list as we have not examined the specimen, which may represent either *Yamaguchiella* (*Yamaguchiella*) *coerulescens* (Spengler, 1790) or *Y. (Neonrosella) vitiata* (Darwin, 1854), and thus its specific determination awaits further investigation. Similarly, a record of *Tetraclita serrata* Darwin, 1854 (S. Teo, pers. comm.) has also been excluded, as recent work by Tsang et al. (2012) and Reynolds et al. (2014) has confirmed that this species, containing two clades, is only distributed in South African waters, and records of the species from SE Asian waters are thus incorrect (B.K.K. Chan, pers. comm., Chan unpublished data). Singapore is the type locality for three genera (*Hoekia* Ross & Newman, 1973; *Nobia* Sowerby, 1823; and *Savignium* Leach, 1825) and four species – *Tetraclita singaporensis* Chan, Tsang & Chu, 2007; *Hoekia monticulariae* (Gray, 1831); *Nobia grandis* Sowerby, 1839; and *Savignium crenatum* (Sowerby, 1823).

Species and papers specifically referring to Singaporean barnacles are marked as follows: \* denotes published record(s), ■ denotes unpublished record(s). The locality Singapore is denoted in bold type in the distribution data. Species not specifically recorded from Singaporean waters but whose currently recorded distributions encompass or by inference encompass them are also included in the checklist.

The systematic arrangement used reflects current inferred phylogenetic relationships within the Cirripedia (Thoracica) (Ahyong et al., 2011) and includes recent revisions, such as Ross & Perreault (1999), Young (2002, 2007), Pitombo (2004), Buckeridge & Newman (2006), Van Syoc & Newman (2010) and Van Syoc & DeKelboun (2011, 2012). Cladistic and molecular studies are also included, e.g., Harris et al. (2000), Pérez-Losada et al. (2004, 2008, 2012), Chan et al. (2007a, b, 2009b), Simon-Belcher et al. (2007), Tsang et al. (2012, 2013, 2015a, b), Chen et al. (2014), Tsang et al. (2015), Shen et al. (2015a, b), Shen et al. (2016a) and Shen et al. (2016b).

References to new ontogenetic, larval, morphological, ecological and phylogeographic data are also included e.g., Jensen et al. (1994), Høeg et al. (1999), Newman & Ross (2001), Chan (2003), Yan & Chan (2004b), Yan et al. (2006), Høeg & Møller (2006), Chan et al. (2008a, b, 2009a, c, 2010, 2013), Tsang et al. (2008, 2009, 2014), Read et al. (2012), Cheang et al. (2013) and Simon-Blecher et al. (2015). Additionally, specific details of hosts stated in reference texts and their currently accepted names are added, as are remarks where appropriate. The checklist includes type species data and accommodates records of intertidal,

Western Australian Museum, Locked Bag 49, Welshpool DC, Western Australia 6986; Email: diana.jones@museum.wa.gov.au (\*corresponding author; DSJ); andrew.hosie@museum.wa.gov.au (AMH)

shallow water and deep water species from Singapore and its neighbouring waters. This builds upon and updates the relevant species previously included in a checklist of the barnacles of the South China Seas presented by Jones et al. (2000) and the numbering of the bibliography of that publication is retained. Additional references are inserted alphabetically amongst this system. The current checklist thus provides a comprehensive bibliography, enabling the thoracican cirripede fauna of Singapore to be considered in a broader regional context.

**A CHECKLIST OF THE CIRRIPEDIA:  
THORACICA OF SINGAPORE AND  
NEIGHBOURING WATERS**

**CLASS MAXILLOPODA Dahl, 1956**

**INFRACLASS CIRRIPEDIA Burmeister,  
1834 (= Cirrhipèdes Lamarck, 1806)**

**SUPERORDER THORACICA Darwin, 1854**

**ORDER IBLIFORMES Buckeridge & Newman, 2006**

**Ibliformes Buckeridge & Newman, 2006: 4.**

**FAMILY IBLIDAE Leach, 1825**

Iblinae Leach, 1825: 209 nom. trans.  
Tetraspidae Gruvel, 1905a: 146.  
Iblinae. — Pilsbry, 1907c: 3.  
Ibloidea Leach. — Zevina, 1980: 69 nom. trans.  
Iblomorpha Newman, 1987: 8. — Newman, 1993: 410 (= Prothoracica Anderson, 1994: 332).

**Genus *Ibla* Leach, 1825**

*Ibla* Leach, 1825: 209.

Type species *Ibla cumingi* Darwin, 1852: 183; type locality Guimavas I., Philippines; littoral.

***Ibla cumingi* Darwin, 1852**

*Ibla cumingii* Darwin, 1852: 183, pl. IV fig. 8, pl. V figs. 1–8, pl. X figs. 4, 11. — Dong et al., 1982: 71, fig. — Zevina et al., 1992: 40, fig. 26.

*Ibla cumingi*. — Weltner, 1897: 251.

*Ibla sibogae* Hoek, 1907: 48, pl. IV figs. 20–22, pl. V figs. 1–8.

*Ibla cumingi* f. *sibogae*. — Annandale, 1911a: 229. — Annandale, 1916a: 131, pl. vii figs. 8, 9.

*Ibla cumingi sibogae*. — Newman, 1960a: 100, figs. 1, 2.

**Distribution.** Indo-west Pacific: Red Sea; Persian Gulf; Madagascar; N, W and E Indian Ocean; Australia; Borneo; Sumatra; Sunda Is; Malay Arch.; Gulf of Thailand; Ream, Fu Kuoh Is (Cambodia); Vietnam, Condor Is; Lien Chien, Tourane; S China Sea; Hong Kong; China; Taiwan; Philippines; S Japan (S Housyu; Kyusyu and Ryukyu Is); Palao Is.; littoral rock crevices, oyster beds.

(9, 19, 44, 46, 84, 86, 95, 96, 111, 113b, 178, 181, 182, 183, 203, 205, 211, 291, 303, 333, 347, 354, 364, 372, 433, 440, 442, 512, 520, 528, 535, 537, 583a, 592); (13, as *Ibla cumingi* f. *siboga*); (196, as *Ibla sibogae*); (Wu, 1975; Zevina et al., 1992; Leung & Jones, 2000; Liu & Ren, 2007; Poltarukha & Dautova, 2007, Poltarukha & Zvyagintsev, 2008; Chan, Prabowo & Lee, 2009b; Read et al., 2012).

**ORDER LEPADIFORMES Buckeridge & Newman,  
2006**

Buckeridge & Newman, 2006: 21.

**SUBORDER HETERALEPADOMORPHA Newman,  
1987**

Heteralepadidae Nilsson-Cantell, 1921: 245.

Heteralepadoidea Newman, 1987: 5 (stat. et sensu nov.).

Heteralepadomorpha Newman, 1987: 8.

**FAMILY HETERALEPADIDAE Nilsson-Cantell, 1921**

Heteralepadidae Nilsson-Cantell, 1921: 245.

Lepadidae Darwin, 1852: 8 (part.).

**Genus *Heteralepas* Pilsbry, 1907**

*Alepas* Darwin, 1852: 156, pl. III figs. 5, 6 (part., exclusive of *A. parasita*).

*Heteralepas* s. l. Pilsbry, 1907a: 100.

*Heteralepas (Heteralepas)* Pilsbry, 1907a: 100.

*Heteralepas* s. str. — Newman, 1960a: 109.

Type species *Alepas rex* Pilsbry, 1907c: 186, fig. 3, pl. IV fig. 7; type locality Kauai I., Hawaiian waters.

***Heteralepas cornuta* (Darwin, 1852)**

*Alepas cornuta* Darwin, 1852: 165, pl. 3 fig. 6, pl. 10 figs. 8, 28.

*Heteralepas (Heteralepas) cornuta*. — Pilsbry, 1907a: 101 [by inference]. — Broch, 1927a: 16, pl. IV figs. 26–29, text fig. III.

*Heteralepas cornuta*. — Nilsson-Cantell, 1927: 756.

**Distribution.** Cosmopolitan: Atlantic Ocean (off St Vincent, W. Indies); Indo-Pacific; Indian Ocean; Andaman Is; Philippines; attached to echinoid spines, gorgonians, crinoids; 90–4315 m.

(128, 195, 333, 349, 449, 451, 459, 500, 501, 592); (86, as *Alepas cornuta*); (42, as *Heteralepas (Heteralepas) cornuta*).

***Heteralepas gigas* (Annandale, 1905)**

*Alepas gigas* Annandale, 1905: 80, pl. VIII fig. 3a, b.

*Heteralepas gigas*. — Annandale, 1916a: 298. — Zevina, 1982: 107, figs. 92, 93.

**Distribution.** Java Sea; Malay Arch.; South China Sea; attached to deep sea telegraph cables; 238–915 m.

(3, 18, 364, 592); (80, as *Alepas gigas*).

Table 1. Species recorded from Singaporean waters

(\*published record; ■ pers com. Dr S. Teo; ▲ type locality)

1. *Heteralepas japonica* (Aurivillius, 1892) \*
2. *Glyptelasma hamatum* Calman, 1919 \*
3. *Fischeriella tridens tridens* (Aurivillius, 1894) \*
4. *Octolasmis angulata* (Aurivillius, 1894) \*
5. *Octolasmis bullata* (Aurivillius, 1892) \*
6. *Octolasmis collare* Jeffries, Vorris & Man, 1988 \*
7. *Octolasmis cor* (Aurivillius, 1892) \*
8. *Octolasmis neptuni* (MacDonald, 1869) \*
9. *Octolasmis warwickii* (Gray, 1825) \*
10. *Octolasmis* sp. a \*
11. *Octolasmis* sp. b \*
12. *Octolasmis* sp. c \*
13. *Calantica kampeni* (Annandale, 1909) \*
14. *Caudoeuraphia caudata* (Pilsbry, 1916) ■
15. *Microeuraphia withersi* (Pilsbry, 1916) \*■
16. *Chthamalus malayensis* Pilsbry, 1916 \*■
17. *Chelonibia testudinaria* (Linnaeus, 1758) ■
18. *Tetraclitella* (*Eotetraclitella*) *costata* (Darwin, 1854) ■
19. *Tetraclitella* (*Tetraclitella*) *divisa* (Nilsson-Cantell, 1921) ■
20. *Tetraclitella* *singaporensis* Chan, Tsang & Chu, 2007 \*▲
21. *Tetraclitella squamosa* (Bruguière, 1789) \*■
22. *Armatobalanus* (*Armatobalanus*) *cepa* (Darwin, 1854) \*
23. *Armatobalanus* (*Armatobalanus*) *quadrivittatus* (Darwin, 1854) \*
24. *Membranobalanus longirostrum* (Hoek, 1913) \*
25. *Striatobalanus amaryllis* (Darwin, 1854) \*■
26. *Striatobalanus tenuis* (Hoek, 1883) \*
27. *Acasta cyathus* Darwin, 1854 \*
28. *Euacasta dofleini* (Krüger, 1911) \*
29. *Eoatria quinquevittatus* (Hoek, 1913) \*
30. *Cantellius euspinulosa* (Broch, 1931) \*
31. *Cantellius gregarius* (Sowerby, 1823) \*
32. *Cantellius pallidus* (Broch, 1931) \*
33. *Cantellius secundus* (Broch, 1931) \*
34. *Cantellius tredecimus* (Kolosvary, 1947) \*
35. *Darwiniella conjugatum* (Darwin, 1854) \*
36. *Galkinius decimus* (Ross & Newman, 1973) \*
37. *Galkinius indicus* (Annandale, 1924) \*
38. *Nobia grandis* Sowerby, 1839 \*▲
39. *Nobia orbicellae* (Hiro, 1934) \*
40. *Savignium crenatum* (Sowerby, 1823) \*▲
41. *Hoekia monticulariae* (Gray, 1831) \*▲
42. *Amphibalanus amphitrite* (Darwin, 1854) \*■
43. *Amphibalanus cirratus* (Darwin, 1854) \*■
44. *Amphibalanus improvisus* (Darwin, 1854) \*
45. *Amphibalanus poecilotheca* (Krüger, 1911) \*■
46. *Amphibalanus reticulatus* (Utinomi, 1967) ■
47. *Amphibalanus variegatus variegatus* (Darwin, 1854) ■
48. *Megabalanus tintinnabulum* (Linnaeus, 1758) ■

***Heteralepas japonica* (Aurivillius, 1892)\***

*Alepas japonica* Aurivillius, 1892: 125. — Aurivillius, 1894: 28, pl.

II figs. 14, 15, pl. VIII figs. 3, 7, pl. IX fig. 3.

*Alepas indica* Gruvel, 1901: 259. — Gruvel, 1905a: 162, fig. 179.

*Heteralepas* (*Heteralepas*) *japonica*. — Pilsbry, 1907a: 101 [by inference].

*Heteralepas japonica*. — Pilsbry, 1911a: 71, fig. 4. — Zevina et al., 1992: 31, fig. 19.

*Heteralepas* (*Heteralepas*) *japonica* var. *alba* Krüger, 1911a: 34, pl. 1 fig. 2b.

*Heteralepas* (*Heteralepas*) *dubia* Broch, 1922: 288, fig. 38.

**Distribution.** Indo-west Pacific: Indian Ocean; Australia; Singapore, Malacca Str., Indonesia; Malay Arch.; Vietnam; Condor Is; S China Sea; E China Sea; Taiwan, Philippines; S Japan; NE New Zealand; fouling hard rock substrata, crabs, gorgonians, antipatharians, deep-sea cables; 48–500 m.

(44, 46, 95, 112a, 124, 169b, 182, 205, 279, 303, 347, 349, 364, 365, 367, 372, 400, 451, 520, 522, 592); (22, 23, 128, as *Alepas japonica*); (39, as *Heteralepas* (*Heteralepas*) *dubia*); (128, as *Alepas indica*); (Zevina et al., 1992; Liu & Ren, 2007; Poltarukha & Zvyagintse, 2008; Chan, Prabowo & Lee, 2009b).

**Genus *Paralepas* Pilsbry, 1907**

*Alepas* Darwin, 1852: 156 (part.).  
*Heteralepas* (*Paralepas*) Pilsbry, 1907a: 100, fig. 34A.  
*Paralepas* s. str. — Newman, 1960a: 108.

Type species *Alepas percarinata* Pilsbry, 1907c: 185, fig. 2, pl. IV fig. 8; type locality Molokai, Hawaiian waters.

***Paralepas lithotryae* (Hoek, 1907)**

*Alepas lithotryae* Hoek, 1907: 39, pl. IX figs. 5–8.  
*Paralepas lithotryae*. — Newman, 1960a: 112, fig. 6.

**Distribution.** Indo-west Pacific: Indian Ocean; Malay Arch.; Philippines; attached to cirripedes (*Lithotrya* sp., *Lithotrya nicobarica*); littoral.

(333, 372, 442, 592); (197, as *Alepas lithotrya*).

***Paralepas minuta* (Philippi, 1836)**

*Alepas minuta* Philippi, 1836: pl. 12 fig. 23.  
*Alepas* (*Paralepas*) *minuta*. — Weltner, 1897: 239.  
*Heteralepas* (*Paralepas*) *minuta*. — Broch, 1927b: 18, fig. 4, pl. 1 figs. 1, 2.  
 ?*Paralepas minuta nipponica* Utinomi, 1970: 342.  
*Paralepas minuta*. — Stubbings, 1967: 240. — Newman, 1960a: 109. — Chan, 2009: 58, fig. 1 I, 11 A–G.

**Distribution.** Mediterranean; W Africa; Mediterranean; Indo-west Pacific: Indian Ocean; Australia; Java Sea; Malay Arch.; Taiwan; Japan; Philippines; Japan; New Zealand (N); attached to spines of cidarids (e.g., *Stylocidaris* sp., *Cidaris* sp.); 110–207 m.

(43, 333, 501, 537); (Chan, 2009; Chan, Prabowo & Lee, 2009b).

***Paralepas morula* (Hoek, 1907)**

*Alepas morula* Hoek, 1907: 35, pl. 4 figs. 9–12.  
*Heteralepas* (*Paralepas*) *morula*. — Broch, 1922: 28, fig. 34.  
*Paralepas morula*. — Newman, 1960a: 109.

**Distribution.** Flores Sea; Philippines; Bass Strait, N of Tasmania; attached to spines of echinoids, e.g., *Histocidaris elegans* (Agassiz, 1879); 182–538 m.

(196, 450, 592); (197, as *Alepas morula*); (39, as *Heteralepas* (*Paralepas*) *morula*); (333, as *Paralepas morula*).

***Paralepas malaysiana* (Annandale, 1905)**

*Alepas malaysiana* Annandale, 1905: 81, pl. VIII figs. 4, 4a.  
*Heteralepas malayana*. — Annandale, 1909a: 130.  
*Heteralepas* (*Paralepas*) *malaysiana*. — Annandale, 1916a: 298.  
*Paralepas malaysiana*. — Zevina, 1982: 131, fig. 117, a, b.

Gaspar Straits, Malay Arch.; 55 m.

**Distribution.** (592); (3, as *Alepas malaysiana*); (7, as *Heteralepas malaysiana*); (18, as *Heteralepas* (*Paralepas*) *malaysiana*).

***Paralepas nodulosa* (Broch, 1922)**

*Heteralepas* (*Paralepas*) *nodulosa* Broch, 1922: 286, fig. 37.  
*Paralepas nodulosa*. — Newman, 1960a: 109.

**Distribution.** Indo-west Pacific: Indian Ocean; Malay Arch.; S China Sea; Philippines; attached to echinoid spines (e.g., *Cidaris* sp.); 110–546 m.

(205, 303, 333, 433, 451, 592); (39, as *Heteralepas* (*Paralepas*) *nodulosa*); (Liu & Ren, 2007).

***Paralepas quadrata* (Aurivillius, 1894)**

?*Anatifa tubulosa* Quoy & Gaimard, 1834: 643, pl. 93 fig. 5.  
*Alepas quadrata* Aurivillius, 1894: 30, pl. II figs. 16, 17, pl. VIII figs. 2, 6, 12.  
*Heteralepas* (*Heteralepas*) *quadrata*. — Pilsbry, 1907a: 103.  
*Heteralepas quadrata*. — Krüger, 1911: 30, figs. 50–53. — Dong et al., 1982: 76, fig.  
*Heteralepas* (*Heteralepas*) *perconicola* Hiro, 1931: 145, figs. 2, 3, pl. XI fig. 2.  
*Heteralepas* (*Paralepas*) *quadrata*. — Hiro, 1937b: 69, fig. 57.  
*Paralepas quadrata*. — Foster, 1979: 17, fig. 5, pl. 2C.

**Distribution.** Java Sea; Taiwan; S China Sea; E China Sea; Philippines; S Japan; N New Zealand; ?Californian coast; epizoid on decapod crustaceans: crabs, e.g., *Plagusia dentipes* De Haan, 1835 (now *Guinusia dentipes* (De Haan, 1835)); rock lobsters; e.g., *Panulirus versicolour* (Latreille, 1804), *P. dasypus* (H. Milne Edwards, 1937); scyllarids, e.g., *Scyllarides squamosus* (H. Milne Edwards, 1837); 0–150 m.

(95, 96, 112a, 182, 185, 192, 205, 442, 512, 520, 528, 535, 592); (23, as *Alepas quadrata*); (164, as *Heteralepas* (*Heteralepas*) *perconicola*); 181, as *Heteralepas* (*Heteralepas*) *quadrata*); (112a, 333, as *Heteralepas quadrata*); (Liu & Ren, 2007 as *Heteralepas quadrata*); (Chan, Prabowo & Lee, 2009b).

**FAMILY KOLEOLEPADIDAE Hiro, 1933**

Koleolepadidae Hiro, 1933a: 246.

**Genus *Koleolepas* Stebbing, 1900**

*Koleolepas* Stebbing, 1900: 667.

Type species *Koleolepas willeyi* Stebbing, 1900: 667, pls. LXXIII, LXXIV d; type locality Sandal Bay, Lifu, Loyalty Islands, New Caledonian Archipelago.

***Koleolepas avis* (Hiro, 1931)**

*Heteralepas* (*Heteralepas*) *avis* Hiro, 1931: 147, figs. 4, 5, pl. 11 figs. 3, 3a.  
*Koleolepas avis*. — Hiro, 1933a: 239, fig. 4, pl. 9 figs. 4–6. — Hosie, 2014: 1–9, figs. 1, 2A–C, 3A–G.

**Distribution.** W Australia; E China Sea; S Japan; found in association with the sea anemone *Calliactis japonica* Carlgren, 1928, attached to gastropod shells inhabited by hermit crabs (e.g., *Dardanus arrosor* (Herbst, 1796)); 20–230 m.

(169a, 183, 205, 303, 522, 538, 592); (164, as *Heteralepas* (*Heteralepas*) *avis*); (Liu & Ren, 2007; Yusa & Yamato, 1999; Yusa et al., 2001; Hosie, 2014).

#### SUBORDER LEPADOMORPHA Pilsbry, 1916

Lepadomorpha Pilsbry, 1916: 14 (Lepadidae sensu Darwin, 1852). Lepadoidea Darwin, 1852: 8 (nom. trans. Zevina, 1978a, b).

#### FAMILY OXYNASPIDIDAE Gruvel, 1905

Pentaspidae Gruvel, 1905: 8 (part.; rejected by Pilsbry, 1907a: 3 as family name not derived from generic name).

Oxynaspidinae Gruvel, 1905a: 102.

Oxynaspidinae. — Pilsbry, 1907a: 79.

Oxynaspididae. — Nilsson-Cantell, 1921: 225.

Oxynaspididae. — Nilsson-Cantell, 1934a: 46.

#### Genus *Minyaspis* Van Syoc & Dekelboum, 2011

*Minyaspis* Van Syoc & Dekelboum, 2011: 15.

Type species *Minyaspis amylanae* Van Syoc & Dekelboum, 2011: 16, figs. 9A–F, 10A–E; type locality Fiji Island, Great Astrolabe, NE of Dravuni Island, 18°44.08'S, 178°32.63'E; 14 m; attached to *Cirrhopathes anguina* (Dana, 1846); 14–27 m.

#### *Minyaspis aurivillii* (Stebbing, 1900)

*Oxynaspis aurivillii* Stebbing, 1900: 675, pl. 76c.

*Minyaspis aurivillii*. — Van Syoc & Dekelboum, 2011: 16.

**Distribution.** Indo-west Pacific: Dar-es-Salaam; Gulf of Aden; Gulf of Thailand; Macclesfield Bank, S China Sea; China; Bonin Is, S Japan; New Britain; attached to *Antipatharia* spp; 10–453 m.

(113a, 183, 205, 320, 339, 347, 430, 486, 492, 508, 592); (Liu & Ren, 2007; Van Syoc & Dekelboum, 2011).

#### *Minyaspis faroni* (Totton, 1940)

*Oxynaspis faroni* Totton, 1940: 483, figs. 27–31.

*Minyaspis faroni*. — Van Syoc & Dekelboum, 2011: 16.

**Distribution.** Red Sea; S China Sea; attached to antipatharians, e.g., *Antipathes lentipinna* Brook, 1889; 20 m.

(205, 508, 592); (Liu & Ren, 2007; Van Syoc & Dekelboum, 2011).

#### *Minyaspis granti* (Totton, 1940)

*Oxynaspis granti* Totton, 1940: 480, figs. 22–25.

*Minyaspis granti*. — Van Syoc & Dekelboum, 2011: 16.

**Distribution.** S of Penang; attached to an antipatharian; depth unknown.

(339, 508, 592) (Van Syoc & Dekelboum, 2012).

#### Genus *Oxynaspis* Darwin, 1852 (Van Syoc & Dekelboum, 2011 emend.)

*Oxynaspis* Darwin, 1852: 133, pl. III.

Type species *Oxynaspis celata* Darwin, 1852: 134, pl. III fig. 1; type locality Madeira, Portugal, attached to an *Antipathes* sp.

#### *Oxynaspis cancellatae* Totton, 1940

*Oxynaspis cancellatae* Totton, 1940: 468, figs. 1, 2. — Van Syoc & Dekelboum, 2011: 5.

**Distribution.** Kei Islands, Malaysia; attached to *Aphanipathes cancellata* Brook, 1889; depth unknown.

(508); (Van Syoc & Dekelboum, 2011).

#### *Oxynaspis celata* Darwin, 1852

*Oxynaspis celata* Darwin, 1852: 134, pl. III fig. 1. — Nilsson-Cantell, 1921: 226, fig. 37. — Van Syoc & Dekelboum 2011: 5. — Chan & Hayashi, 2012: 30, figs. 2C, 7A–H, 8A–H, table 1.

**Distribution.** Atlantic Ocean (Madeira); Indian Ocean (Bay of Bengal); South China Sea (Beibu Gulf); Taiwan Strait; Philippines; Japan; New Zealand; attached to antipatharians (e.g., *Antipathes* sp.); 92–292 m.

(86, 112a, 128, 183, 339, 347, 367, 522, 580, 592); (Liu & Ren, 2007; Poltarukha & Zvyagintsev, 2008; Van Syoc & Dekelboum, 2011; Chan & Hayashi, 2012).

#### Genus *Scleraspis* Van Syoc & Dekelboum, 2012

*Pycnaspis* Van Syoc & Dekelboum, 2011: 3.

*Scleraspis* Van Syoc & Dekelboum, 2012: 68. [replacement name for *Pycnaspis*, which is preoccupied by an extinct fish genus (Ørvig, 1958)]

Type species *Oxynaspis connectens* Broch, 1931: 34, fig. 13; type locality Kei Islands, Malaysia, station 49, 5°37'S, 132°23'E, 245 m; attached to a siliceous sponge.

#### *Scleraspis connectens* (Broch, 1931)

*Oxynaspis connectens* Broch, 1931: 34, fig. 13.

*Oxynaspis cancelatae* Totton, 1940: 468, figs. 1, 2.

*Pycnaspis connectens*. — Van Syoc & Dekelboum, 2011: 3.

*Scleraspis connectens*. — Van Syoc & Dekelboum, 2012: 68.

**Distribution.** Indonesia; Malaysia; Philippines; SW Pacific; attached to siliceous sponges and antipatharians; 183–245 m.

(44, 449, 451, 592); (Van Syoc & Dekelboum, 2011; Van Syoc & Dekelboum, 2012).

**FAMILY POECILASMATIDAE Annandale, 1910**

Lepadidae Darwin, 1854: 8 (part.). — Pilsbry, 1907a: 72 (part.).  
 Lepadinae. — Gruvel, 1905a: 104 (part.).  
 Poecilasmatinae Annandale, 1910a: 64.  
 Poecilasmataidae. — Nilsson-Cantell, 1921: 253.  
 Trilasmataidae Nilsson-Cantell, 1934b: 40.

**Genus *Poecilasma* Darwin, 1852**

*Poecilasma* Darwin, 1852: 99 (part.)

Type species *Anatifa crassa* Gray, 1848: 44, pl. iii, figs. 5, 6; type locality Madeira.

***Poecilasma dubium* Hoek, 1907**

*Poecilasma dubium* Hoek, 1907: 6, pl. I figs. 2–4, pl. X fig. 1a, b.  
*Poecilasma Kaempferi* subsp. *dubium* Annandale, 1910a: 91, pl. VII fig. 8.  
*Poecilasma kaempferi* race II Annandale, 1910a: 91.  
*Poecilasma kaempferi* var. *dubium*. — Krüger, 1911a: 37, figs. 72–76, pl. III fig. 26.  
*Poecilasma kaempferi dubium*. — Zevina, 1982: 98, fig. 86 l.

**Distribution.** Indo-west Pacific: Indian Ocean (Gulf of Manaar); Indonesia (Banda Sea); Philippines (off Batangas); 185–914 m.

(296, 450, 451, 592); (196, as *Poecilasma dubium*); (7, as *Poecilasma kaempferi* subsp. *dubium*); (279, as *Poecilasma kaempferi* var. *dubium*).

***Poecilasma kaempferi kaempferi* Darwin, 1852**

*Poecilasma kaempferi* Darwin, 1852: 102, pl. II fig. 1.  
*Poecilasma aurantia* Darwin, 1852: 105, pl. II fig. 2.  
*Poecilasma kaempferi* var. *aurantium* Gruvel, 1902b: 46. — Gruvel, 1905a: 115, fig. 129.  
*Poecilasma kaempferi novaeangliae* Pilsbry, 1907a: 85, pl. VI figs. 13, 14.  
*Poecilasma inaequilaterale* Pilsbry, 1907a: 85, pl. VI figs. 6–8, 11, 12.  
*Poecilasma kaempferi* race I, race III, IV Annandale, 1909: 91.  
*Poecilasma (Poecilasma) kaempferi*. — Nilsson-Cantell, 1921: 254, fig. 46.  
*Trilasmis (Poecilasma) kaempferi*. — Pilsbry, 1928: 308.  
*Trilasmis kaempferi*. — Nilsson-Cantell, 1938b: 9.  
*Poecilasma kaempferi* var. *eu-kaempferi* Broch, 1931: 29  
*Poecilasma kaempferi* var. *aurantium*. — Gruvel, 1902b: 46. — Gruvel, 1905a: 115, fig. 129.  
*Poecilasma kaempferi aurantium*. — Zevina, 1982: 98, fig. 86m.  
*Poecilasma kaempferi kaempferi*. — Zevina, 1982: 98, fig. 86a–u.

**Distribution.** Cosmopolitan in tropical and warm temperate waters: Atlantic Ocean; Indian Ocean; Malay Arch.; S China Sea; E China Sea; Taiwan, Japan; S Pacific Ocean; usually attached to decapod crustaceans, e.g., *Geryon trispinosus* (Herbst, 1803); *Pleistacantha sancti-johannis* Miers (= *Pleistacantha sanctijohannis* Miers, 1879); *Parhomola japonica* Parisi (= *Paromola japonica* Parisi, 1915); 19–1885 m.

(7, 27, 39, 44, 86, 115, 126, 128, 185, 196; 205, 280, 303, 347, 349, 350, 372, 396, 406, 492, 512, 520, 592); (44, 169b, as *Poecilasma kaempferi* forma *eu-kaempferi*); (112a, 182, 183, 495, as *Trilasmis (Poecilasma) kaempferi* (Darwin)); (372, as *Trilasmis kaempferi*); (392, as *Poecilasma kaempferi novaeangliae*); (392, as *Poecilasma inaequilaterale*); (554, as *Poecilasma kaempferi* var. *aurantium* Darwin); (Liu & Ren, 2007; Chan, Prabowo & Lee, 2009b).

***Poecilasma obliqua* Hoek, 1907**

*Poecilasma obliquum* Hoek, 1907: 12, pl. I figs. 11–12.  
*Poecilasma (Trilasmis) obliquum*. — Krüger, 1911a: 39.  
*Temnaspis obliqua*. — Broch, 1931: 128.  
*Trilasmis (Poecilasma) obliqua*. — Hiro, 1937c: 408, figs. 8, 9. — 1937d: 83, fig. 68.  
*Poecilasma obliqua*. — Chan & Hayashi, 2012: 39, figs. 2E, 12 A–H, 13 A–H.

**Distribution.** S of Kur and Taam Is, Malay Arch.; S China Sea; China; Japan; attached to decapod crustaceans (e.g., *Geryon trispinosus* (Herbst, 1803), *Macrocheira kaempferi* (Temminck, 1836)); 204–864 m.

(205, 303, 592); (196, as *Poecilasma obliquum*); (44, as *Temnaspis obliqua*); (182, 183, as *Trilasmis (Poecilasma) obliquum*); (279, as *Poecilasma (Trilasmis) obliquum*); (Liu & Ren, 2007; Chan & Hayashi, 2012).

**Genus *Glyptelasma* Pilsbry, 1907**

*Glyptelasma* Pilsbry, 1907a: 87.

Type species *Megalasma (Glyptelasma) subcarinatum* Pilsbry, 1907a: 91, pl. VII figs. 1–5; type locality Atlantic Ocean, E of New Jersey, USA.

***Glyptelasma annandalei* (Pilsbry, 1907)**

*Megalasma annandalei* Pilsbry, 1907a: 89, pl. V fig. 14, pl. VII figs. 15–19.  
*Megalasma (Glyptelasma) pilsbryi* Calman, 1919: 365, figs. 1, 2.  
*Glyptelasma annandalei*. — Jones et al., 2000: 238.

**Distribution.** E Africa; Indian Ocean; Malay Arch.; S China Sea; E China Sea; mid Pacific Ocean; attached to *Arcoscaldpellum michelottianum* Seguenza, 1876: 15–1557 m.

(205, 287, 303, 350, 372, 433, 592); (59, 392, as *Megalasma annandalei*); (59, as *Megalasma (Glyptelasma) annandalei*); (Jones et al., 2000; Liu & Ren, 2007).

***Glyptelasma carinatum* (Hoek, 1883)**

*Poecilasma carinatum* Hoek, 1883: 44, pl. I figs. 8–10, pl. II fig. 1, pl. VII figs. 6, 7.  
*Poecilasma (Glyptelasma) carinatum*. — Nilsson-Cantell, 1921: 258.  
*Megalasma (Glyptelasma) carinatum*. — Pilsbry, 1907a: 93. — 1907e: 416.  
*Megalasma carinatum*. — Barnard, 1924: 54.  
*Glyptelasma carinatum*. — Broch, 1931: 32, fig. 11.  
*Non Megalasma carinatum*. — Foster, 1979: 26, fig. 12, pl. 3B (= *Glyptelasma hamatum* Calman, 1919: 370).

**Distribution.** Cosmopolitan: W Indies; N Atlantic Ocean; S. Africa; Malay Arch.; S China Sea; Japan; SE Pacific Ocean; attached to corallines; 60–2865 m.

(27, 44, 57, 59, 112a, 392, 395, 580); (195, as *Poecilasma carinatum*); (196, as *Poecilasma carinatum*); (347, as *Poecilasma (Glyptelasma) carinatum*); (592, as *Megalasma (Glyptelasma) carinatum*); (Liu & Ren, 2007).

#### *Glyptelasma gigas* (Annandale, 1916)

*Poecilasma (Glyptelasma) gigas* Annandale, 1916a: 299, pl. IV fig. 4, pl. V figs. 10–14, pl. VI figs. 7, 8.

*Megalasma (Glyptelasma) gigas*. — Calman, 1919: 364, fig. 1A–C.

*Megalasma gigas*. — Nilsson-Cantell, 1938b: 10.

*Glyptelasma gigas*. — Broch, 1931: 32, fig. 12. — Chan et al., 2009: 3, figs. 1A, 3A–H.

**Distribution.** Indian Ocean; Australia; Malay Arch.; Indonesia; Taiwan; fouling deep-sea cables, hard substrata; 236–1092 m.

(358, 372); (18, as *Poecilasma gigas*); (59, 350, 592, as *Megalasma (Glyptelasma) gigas*); (Chan, Prabowo & Lee, 2009b).

#### *Glyptelasma gracile* (Hoek, 1883)

*Poecilasma gracile* Hoek, 1883: 46, pl. II figs. 2–4.

*Megalasma gracile*. — Nilsson-Cantell, 1938b: 10.

*Megalasma gracile gracilius*. — Pilsbry, 1907a: 88, pl. V fig. 16, pl. VII figs. 6–9.

*Megalasma (Glyptelasma) gracile*. — Zevina, 1982: 84, fig. 74.

*Glyptelasma gracile*. — Jones et al., 2000: 239.

**Distribution.** E Indian Ocean; Australia; Indonesia (Sumbawa); Malay Arch; Philippines (NW Panay I.); attached to glassy spicule of hexactinellid sponge, fragments of sea urchin tests, spines of cidarids (e.g., *Dodocidaris papillata* Agassiz, 1872); 395–935 m.

(372, 451); (195, as *Poecilasma gracile*); (392, as *Megalasma gracile gracilius*); (592, as *Megalasma (Glyptelasma) gracile*); (Jones et al., 2000).

#### *Glyptelasma hamatum* Calman, 1919\*

*Poecilasma (Glyptelasma) hamatum* Calman, 1919: 370, figs. 5–7.

*Megalasma (Glyptelasma) hamatum*. — Nilsson-Cantell, 1928: 23, fig. 11.

*Megalasma carinatum*. — Foster, 1979: 26, fig. 12, pl. 3B.

*Glyptelasma hamatum*. — Young, 1998a: 34. — Chan, 2009: 61, figs. 1 H, 14 A–F, 15 A–I.

**Distribution.** Atlantic Ocean; Indian Ocean; **Singapore**; E China Sea; Philippines; Pacific Ocean; fouling seep-sea cables and hard surfaces; 366–3660m.

(112a, 205, 303, 349, 350, 358, 365, 577); (59, 592, as *Megalasma (Glyptelasma) hamatum*); (Liu & Ren, 2007; Chan, 2009).

#### *Glyptelasma pilsbryi* (Calman, 1919)

*Poecilasma (Glyptelasma) pilsbryi* Calman, 1919: 365, figs. 1, 2.

*Megalasma (Glyptelasma) pilsbryi*. — Nilsson-Cantell, 1928: 20, fig. 9.

*Glyptelasma pilsbryi*. — Jones et al., 2000: 239.

**Distribution.** Cosmopolitan: Atlantic Ocean; Indian Ocean; Australia; Malay Arch; Pacific Ocean; mid Pacific guyots; fouling deep-sea cables, hard substrata; 910–2730 m.

(287, 350, 372); (59, 592, as *Megalasma (Glyptelasma) pilsbryi*); (Jones et al., 2000).

#### Genus *Megalasma* Hoek, 1883

*Megalasma* Hoek, 1883: 50.

Type species *Megalasma (Megalasma) striatum* Hoek, 1883: 51, pl. II figs. 5–9, pl. VII figs. 8, 9; type locality Philippine Archipelago (12°43'N, 122°10'E); attached to spines of an *Echinus* sp., 193–210 m.

#### *Megalasma minus* Annandale, 1906

*Megalasma striatum minus* Annandale, 1906a: 399.

*Megalasma bellum* Pilsbry, 1907a: 93.

*Poecilasma bellum*. — Pilsbry, 1907e: 183, pl. IV fig. 6.

*Megalasma lineatum* Hoek, 1907a: 31, pl. IV figs. 1–8.

*Megalasma minus* Race I, II (*M. bellum* Pilsbry, 1907c) Annandale, 1910a: 97.

*Megalasma (Megalasma) minus*. — Calman, 1919: 362.

*Megalasma minus*. — Pilsbry, 1907d: 408, figs. 1 a–b, 3 a, 4 a–b, 6, pl. 31 figs. 6–8.

*Megalasma carinodentatum* Weltner, 1894: 84. (species dubia)

**Distribution.** Cosmopolitan: Atlantic Ocean; Indo-west Pacific; E coast of Africa (Zanzibar); Indian Ocean; Indonesia; Malay Arch; Philippines; Taiwan; S Japan; Pacific Ocean; attached to echinoid spines, glassy spicule of hexactinellid sponge, gorgonians, deep-sea cables, hard substrata; 295–2050 m.

(27, 39, 59, 350, 372, 451); (5a, as *Megalasma striatum minus*); (7, as *Megalasma minus* Race I, II (*M. bellum*)); (196, as *M. lineatum*); (392, as *Megalasma bellum*); (396, as *Poecilasma bellum*); (592, as *Megalasma (Megalasma) minus*); (Pilsbry, 1907c; Chan, Prabowo & Lee, 2009b).

#### *Megalasma striatum* Hoek, 1883

*Megalasma striatum* Hoek, 1883: 51, pl. II figs. 5–9, pl. VII figs. 8, 9. — Dong et al., 1982: 80, fig.

*Megalasma (Megalasma) elegans*. — Zullo & Newman, 1964: 355, fig. 2 a–i.

*Megalasma (Megalasma) striatum*. — Zevina, 1982: 80, fig. 71. — Chan, 2009: 66, figs. 2A, 16A–H.

**Distribution.** Indo-west Pacific: E coast of Africa, Indian Ocean; N Australia; Indonesia; Malay Arch.; E China Sea; S China Sea; Taiwan; Philippines; S Japan to New Zealand, SW Pacific; attached to echinoid spines (e.g., *Stylocidarid*

*annulosa* Mortensen, 1927), antipatharians (*Antipathes* sp.), gorgonians, glassy spicule of hexactinellid sponges, corallines; 125–984 m.

(39, 44, 95, 96, 112a, 128, 183, 195, 196, 205, 303, 372, 431, 449, 450, 451, 522; 603); (592, as *Megalasma* (*Megalasma striatum*); (Liu & Ren, 2007; Chan, 2009; Chan, Prabowo & Lee, 2009b).

### Genus *Fischeriella* Jones & Özdikmen, 2008

*Poecilasma* (part.) Darwin, 1852: 99.

*Temnaspis* Fischer, 1884: 357 (non *Temnaspis* Lacordaire, 1845: 716).

*Fischeriella* Jones & Özdikmen, 2008: 539.

Type species *Poecilasma fissa* Darwin, 1852: 109, pl. II fig. 4, pl. X fig. 29; type locality Philippine Archipelago.

**Remarks.** Fischer, 1884 proposed the cirripede genus name *Temnaspis* but the name is preoccupied by *Temnaspis* Lacordaire, 1845, a beetle genus. Therefore, the replacement name *Fischeriella* was proposed (Jones & Özdikmen, 2008).

#### *Fischeriella amygdalum* (Aurivillius, 1894)

*Poecilasma amygdalum* Aurivillius, 1894: 10, pl. 1 figs. 4–6, pl. VIII fig. 4.

*Poecilasma fissum*. — Hoek, 1907a: 8 (part.) (non Darwin, 1852: 109).

*Poecilasma amygdalum madagascariense* Nilsson-Cantell, 1921: 262, fig. 46 d–g, pl. 3 fig. 6.

*Trilasmis fissum hawaiiense* Pilsbry, 1928: 306, pl. 24 figs. 1–8.

*Trilasmis* (*Temnaspis*) *amygdalum*. — Hiro, 1937d: 85, fig. 69.

*Temnaspis amygdalum*. — Utinomi, 1966: 5. — Dong et al., 1982: 77, fig.

*Temnaspis amygdalum amygdalum*. — Zevina, 1982: 70, fig. 62.

*Fischeriella amygdalum*. — Jones & Özdikmen, 2008: 539 [by inference].

**Distribution.** Indo-west Pacific: Indian Ocean; Madagascar through Malaysia, Hong Kong, S China Sea; Taiwan; Philippines; S Japan; tropical W and central Pacific Ocean to Fiji and Hawaii; attached to decapod crustaceans (*Panulirus stimpsoni* Holthuis, 1963, *Panulirus japonicus* (von Siebold, 1824)); shallow water.

(95, 96, 113b, 205, 303, 433, 592); (23, 128, 347, as *Poecilasma amygdalum*); (7, as *Poecilasma fissum* Darwin); (111, 182, 183, 372, 512, 528, as *Trilasmis* (*Temnaspis*) *amygdalum* (Aurivillius)); (196, as *Poecilasma fissum* Darwin); (347, as *Poecilasma amygdalum madagascariense*); (406, as *Trilasmis fissum hawaiiense* Pilsbry); (Leung & Jones, 2000; Liu & Ren, 2007; Jones & Özdikmen, 2008).

#### *Fischeriella bathynomi* (Annandale, 1906)

*Dichelaspis bathynomi* Annandale, 1906c: 45 fig. 2.

*Octolasmis bathynomi*. — Nilsson-Cantell, 1938b: 10.

*Temnaspis bathynomi*. — Zevina, 1982: 77, fig. 68.

*Fischeriella bathynomi*. — Jones & Özdikmen, 2008: 539 (by inference).

**Distribution.** Indian Ocean; S China Sea; attached to pleopods of isopods (*Bathynomus giganteus* A. Milne-Edwards, 1879); 327–1086 m.

(5b, 205, 303, 372, 541, 592); (7, as *Dichelaspis bathynomi*); (Liu & Ren, 2007; Jones & Özdikmen, 2008).

#### *Fischeriella excavatum* (Hoek, 1907)

*Poecilasma excavatum* Hoek, 1907a: 10, pl. I figs. 5–10.

*Poecilasma tridens*. — Weltner, 1922: 80, pl. 4 fig. 19 (non Aurivillius).

*Poecilasma* (*Temnaspis*) *excavatum*. — Nilsson-Cantell, 1925: 16, fig. 5, pl. 1 fig. 1.

*Temnaspis excavatum*. — Broch, 1931: 31, fig. 10. — Dong et al., 1982: 77, fig.

*Trilasmis* (*Temnaspis*) *excavatum*. — Hiro, 1937c: 412.

*Dichelaspis* (*Dichelaspis*) *tridens*. — Stubbings, 1936: 7, fig. 2. (non Aurivillius).

*Trilasmis excavatum*. — Nilsson-Cantell, 1938b: 9.

*Fischeriella excavatum*. — Jones & Özdikmen, 2008: 539 [by inference].

**Distribution.** Indo-west Pacific: E Africa (Zanzibar); Gulf of Aden; Indonesia; Malay Arch.; S China Sea; E China Sea; Philippines; S Japan (Goto Is); attached to echinoid spines (*Pleistacantha sanctijohannis* Miers, 1879; *Echinoplax pungens* Wood-Mason & Alcock, 1891), to crustaceans, e.g., *Puerulus angulatus* (Bate, 1888); *Ibacus ciliatus* (von Siebold, 1824); *Macrocheira kaempferi* (Temminck, 1836); *Carcinoplax longimanus* (de Haan, 1833), *Bathynomus giganteus* A. Milne-Edwards, 1879; palinurids and cirripedes, e.g., *Heteralepas japonica* Aurivillius, 1892; 189–600 m

(95, 96, 185, 205, 303, 449, 451, 493, 592); (196, as *Poecilasma excavatum*); (44, as *Temnaspis excavatum*); (46, as *Temnaspis tridens* forma *asymmetrica*); (182, 183, as *Trilasmis* (*Temnaspis*) *excavatum*); (371, as *Trilasmis excavatum*); (492, as *Dichelaspis* (*Dichelaspis*) *tridens*); (348, 492, as *Poecilasma* (*Temnaspis*) *excavatum*); (554, as *Poecilasma tridens*); (Liu & Ren, 2007; Jones & Özdikmen, 2008).

#### *Fischeriella fissum* Darwin, 1852

*Poecilasma fissa* Darwin, 1852: 109, pl. II fig. 4, pl. X fig. 29.

*Poecilasma fissum*. — Hoek, 1907a: 8–10, pl. 10 figs. 2–5.

*Trilasmis fissum hawaiiense* Pilsbry, 1928: 306, pl. 24 figs. 1–8.

*Trilasmis* (*Temnaspis*) *fissum*. — Rosell, 1972: 160, pl. VII figs. 1–9.

*Trilasmis* (*Temnaspis*) *fissa*. — Newman et al., 1969: R279.

*Temnaspis fissum*. — Zevina, 1982: 69, fig. 61.

*Fischeriella fissum*. — Jones & Özdikmen, 2008: 539 [by inference].

**Distribution.** Ternate, Halmahera I., Indonesia; Philippines; New Caledonia; Port Jackson, New South Wales Australia; Jaluit; Marshall Is; Honolulu, Hawaii; attached to crustaceans (crabs, *Palinurus* spp); shallow water.

(196, 346; 406, 442, 592, 551a); (86, as *Poecilasma fissa*; Jones & Özdikmen, 2008).



**Fischeriella lenticula (Aurivillius, 1894)**

- Poecilasma lenticula* Aurivillius, 1894: 12, pl. I figs. 7, 8, pl. VIII figs. 15, 28.  
*Poecilasma fissum* Hoek, 1907a: 8, pl. X figs. 2–5 (part., non *P. fissum* Darwin, 1852: 109).  
*Poecilasma (Temnaspis) lenticula*. — Nilsson-Cantell, 1921: 25, fig. 47, pl. III, 5.  
*Trilasmis (Temnaspis) lenticula*. — Nilsson-Cantell, 1931b: 9, fig. 3.  
*Temnaspis lenticula*. — Zevina, 1982: 71, fig. 63.  
*Fischeriella lenticula*. — Jones & Özdikmen, 2008: 539 [by inference].

**Distribution.** Indo-west Pacific: Indian Ocean; Malagasy (Madagascar); Java Sea; Malay Arch., Philippines; Japan; attached to crustaceans, e.g., rock lobsters (*Palinurus* sp.), anomuran crabs; shallow water.

(372, 442, 592); (23, 128, as *Poecilasma lenticula*); (10, 196, as *Poecilasma fissum*); (347, 358, as *Poecilasma (Trilasmis) lenticula*); (440, as *Trilasmis (Temnaspis) lenticula*); (Jones & Özdikmen, 2008).

**Fischeriella tridens tridens (Aurivillius, 1894)\***

- Poecilasma tridens* Aurivillius, 1894: 14, pl. I fig. 13, pl. VI fig. 12, pl. VIII figs. 13, 29.  
*Dichelaspis oclusa* Lanchester, 1902: 373, pl. XXXV fig. 6–6c.  
*Dichelaspis tridens*. — Annandale, 1909a: 107, pl. VII, figs. 1, 2.  
*Octolasmis (Dichelaspis) tridens*. — Pilsbry, 1911b: 172.  
*Octolasmis tridens*. — Barnard, 1924: 57.  
*Temnaspis tridens*. — Broch, 1931: 128. — 1947: 18, fig. 4. — Zevina et al., 1992: 19, fig. 10.  
*Trilasmis (Temnaspis) tridens*. — Stubbings, 1961b: 17.  
*Temnaspis tridens tridens*. — Zevina, 1982: 75, fig. 67.  
*Fischeriella tridens tridens*. — Jones & Özdikmen, 2008: 539 [by inference].

**Distribution.** S Atlantic; Indo-west Pacific: E Indian Ocean; Bay of Bengal; **Singapore**; Gaspar Str.; Malay Arch.; Gulf of Thailand; Vietnam; Bay of Tonkin; Condor I.; Hong Kong; S China Sea; E China Sea; Philippines; SW Pacific; attached to gill chamber, mouthparts and carapace of decapod crustaceans (*Charybdis feriata* (Linnaeus, 1758); *C. anisodon* (de Haan, 1850); *C. natator* (Herbst, 1794); *Myomenippe hardwickii* (Gray, 1831); *Ovalipes punctatus* (de Haan, 1833); *Podophthalmus vigil* (Fabricius, 1798); *Portunus pelagicus* (Linnaeus, 1758); *P. sanguinolentus* (Herbst, 1783); *P. trituberculatus* (Miers, 1876); *Thalamita crenata* Rüppell, 1830; *T. spinimana* Dana, 1852; *Thenus orientalis* (Lund, 1793); 0–296 m.

(9, 10, 205, 218, 222, 303, 319, 365, 372, 541, 580, 592); (23, 128, 347, as *Poecilasma tridens*); (7, as *Dichelaspis tridens*); (27, 113b, 364, 501, as *Octolasmis tridens*); (46, as *Temnaspis tridens tridens* (Aurivillius)); (46, 579, Zevina et al., 1992, as *Temnaspis tridens*); (128, 291, as *Dichelaspis oclusa*); (449, 450, 495, as *Trilasmis (Temnaspis) tridens*); (492, as *Dichelaspis (Dichelaspis) tridens*); (Leung & Jones, 2000; Liu & Ren, 2007; Jones & Özdikmen, 2008; Poltarukha & Zvyagintsev, 2008).

**Genus Octolasmis Gray, 1825**

- Octolasmis* Gray, 1825: 100.  
*Dichlaspis* Darwin, 1852: 115.  
*Parodolepas* MacDonald, 1869: 442.  
*Trichelapsis* Stebbing, 1894: 443.

Type species *Octolasmis warwickii* Gray, 1825: 100; 1830: pl. VI fig. 16; type locality Borneo.

**Octolasmis angulata (Aurivillius, 1894)\***

- Dichelaspis angulata* Aurivillius, 1894: 22, pl. II figs. 9–11, pl. VIII figs. 18, 24.  
*Dichelaspis aperta* Aurivillius, 1894: 24, pl. I figs. 14–16.  
*Dichelaspis cuneata* Aurivillius, 1894: 25, pl. I figs. 17–19.  
*Dichelaspis transversa* Annandale, 1906c: 44, fig. 1, 1 a.  
*Octolasmis angulata*. — Nilsson-Cantell, 1934b: 46, fig. 7, 8. — Dong et al., 1982: 79, fig. — Zevina et al., 1992: 22, fig. 12.

**Distribution.** Indo-west Pacific: Indian Ocean; Malay Arch.; Java Sea; **Singapore**; Vietnam; Hong Kong; S China Sea; Philippines; Taiwan; S Japan; attached to gills and mouthparts of a variety of decapod crustaceans (e.g., *Atergatis integerrimus* (Lamarck, 1818); *Charybdis feriata* (Linnaeus, 1758); *C. natator* (Herbst, 1794); *C. truncata* (Fabricius, 1798); *Camposcia retusa* (Latreille, 1829); *Etisus utilis* Jacquinet 1852 in Jacquinet & Lucas, 1853; *Lophozozymus pictor* (Fabricius, 1798); *Menippe rumphii* (Fabricius, 1798); *Myomenippe hardwickii* (Gray, 1831); *Podophthalmus vigil* (Fabricius, 1798); *Portunus pelagicus* (Linnaeus, 1758); *P. sanguinolentus* (Herbst, 1783); *Thalamita crenata* Rüppell, 1830; *T. danae* Stimpson, 1858; *T. spinimana* Dana, 1852); shallow water.

(23, 95, 96, 113b, 182, 205, 218, 222, 224, 303, 365, 367, 372, 440, 442, 535, 541, 579, 580, 592); (5b, as *Dichelaspis transversa*); (7, 128, as *Dichelaspis angulata*); (7, 128, as *Dichelaspis aperta*); (128, as *Dichelaspis cuneata*); (Zevina et al., 1992; Leung & Jones, 2000; Yan, Huang & Miao, 2004; Liu & Ren, 2007; Poltarukha & Zvyagintsev, 2008; Chan, Prabowo & Lee, 2009b).

**Octolasmis aperta (Aurivillius, 1892)**

- Dichelaspis aperta* Aurivillius, 1892: 24, pl. I figs. 14–16.  
*Octolasmis (Octolasmis) aperta*. — Rosell, 1972: 165, pl. IX, figs. 1–7.

**Distribution.** Java Sea; Philippines; attached to gills of *Panulirus* spp.; shallow water.

(22; 442).

**Octolasmis bullata (Aurivillius, 1892)\***

- Dichelaspis bullata* Aurivillius, 1892: 125. — 1894: 26, pl. II figs. 12, 13, pl. VI figs. 10, 11, pl. VIII figs. 19, 25.  
*Dichelaspis angulata*. — Annandale, 1909a: 122 (part.).  
*Octolasmis angulata* f. *bullata*. — Hiro, 1937c: 426, fig. 17e–g, fig. 18 a–g.  
*Octolasmis bullata*. — Leung & Jones, 2000: 105. — Jones et al., 2000: 144.

**Distribution.** Indo-west Pacific: Indian Ocean; Australia (N); Java; **Singapore**; Malay Arch.; Hong Kong; S China Sea; Philippines; S Japan; attached to gills of decapod crustaceans (e.g., *Panulirus polyphagus* (Herbst, 1793), *P. stimpsoni* Holthuis, 1963); shallow water.

(205, 222, 303, 541); (22, as *Dichelaspis bullata*); (7, 23, as *Dichelaspis angulata*); (96, 113b, as *Octolasmis angulata bullata*); (182, 537, as *Octolasmis angulata f. bullata*); (442, as *Octolasmis (Octolasmis) angulata f. bullata*); (Jones et al., 2000; Leung & Jones, 2000; Liu & Ren, 2007).

***Octolasmis clavula* Hiro, 1936**

*Octolasmis clavula* Hiro, 1936c: 224, fig. 2.

**Distribution.** Indo-west Pacific: Persian Gulf; Malay Arch.; S China Sea; S Japan (Ogasawara Is); attached to maxillipeds of decapod crustaceans, e.g., *Acanthides armatus* (note misspelling of *Cancer (Acanthodes) armatus* De Haan, 1833, now *Hypothalassia armata* (De Haan, 1833); shallow water (16–135 m).

(177, 182, 541).

***Octolasmis collare* Jeffries, Vorris & Man, 1988\***

*Octolasmis collare* Jeffries, Vorris & Man, 1988: 112, fig. 1A–H.

**Distribution.** **Singapore Straits**, Tuas, **Singapore**; attached to gill chamber and mouthparts of decapod crustaceans, e.g., *Galene bispinosa* (Herbst, 1793), *Matuta lunaris* (Forskäl, 1775); shallow water.

(218, 219, 541).

***Octolasmis cor* (Aurivillius, 1892)\***

*Dichelaspis cor* Aurivillius, 1892: 124. — 1894: 20, pl. 2 figs. 1, 2. *Dichelaspis Maindroni* Gruvel, 1902a: 282, pl. I figs. 15, 16, pl. IV figs. 21–27.

*Dichelaspis Coutierei* Gruvel, 1902a: 289, pl. IV figs. 28–32.

*Octolasmis cor*. — Stebbing, 1910: 565. — Zevina et al., 1992: 23, fig. 13.

**Distribution.** Indo-west Pacific: S. Africa; Indian Ocean; **Singapore**; Malay Arch.; Vietnam; S China Sea; Philippines; Taiwan; Japan; Moen I., Truk, Carolines; attached to gill chambers of decapod crustaceans (e.g., *Charybdis feriata* (Linnaeus, 1758); *Panulirus* spp, *Podophthalmus vigil* (Fabricius, 1798); *Scylla serrata* (Forskäl, 1755); *Thalamita crenata* Rüppell, 1830; *T. spinimana* Dana, 1852; *T. sima* H. Milne Edwards, 1834); shallow water.

(9, 27, 205, 218, 220, 221, 222, 223, 224, 303, 318, 319, 333, 372, 440, 487, 541, 579, 580, 592); (7, 22, 23, as *Dichelaspis cor*); (128, as *Dichelaspis maindroni*); (128, as *Dichelaspis coutierei*); (Zevina et al., 1992; Liu & Ren, 2007; Poltarukha & Zvyagintsev, 2008; Chan, Prabowo & Lee, 2009b).

***Octolasmis geryonophila* Pilsbry, 1907**

*Octolasmis geryonophila* Pilsbry, 1907a: 94, fig. 32a, b.

*Dichelaspis geryonophila*. — Annandale, 1909a: 112, pl. 6 figs. 11–13.

*Dichelaspis geryonophila* var. *fissicarina* Annandale, 1909a: 113, pl. 6 figs. 14, 15.

*Octolasmis aymonini geryonophila*. — Newman, 1961b: 327.

*Octolasmis aymonini fissicarina*. — Newman, 1961b: 328.

*Octolasmis geryonophila geryonophila*. — Zevina, 1982: 57, fig.48.

**Distribution.** NW Atlantic; Caribbean; Indian Ocean; S China Sea; 19°21.3'N, 114°04.4'E, gill chambers of decapod crustaceans (e.g., *Bathynectes superbus* (A. Costa, in O. Costa & A. Costa, 1853); *Geryon trispinosus* (Herbst, 1803); *G. quinquedens* (Smith, 1879); 407–1877 m.

(63, 150, 182, 205, 286, 303, 541, 592); (336, 392, as *Octolasmis aymonini geryonophila*); (7, as *Dichelaspis geryonophila*); (7, as *Dichelaspis geryonophila* var. *fissicarina*); (336, as *Octolasmis aymoni fissicarina*); (Liu & Ren, 2007).

***Octolasmis grayi* (Darwin, 1852)**

*Dichelaspis grayi* Darwin, 1852: 123, pl. II fig. 9.

*Dichelaspis pellucida* Darwin, 1852: 125, pl. II fig. 7.

*Dichelaspis lepadiformis* Gruvel, 1900a: 109.

*Octolasmis grayi*. — Nilsson-Cantell, 1930b: 5, fig. 1.

**Distribution.** Tropical Indo-west Pacific Oceans; pelagic; attached to body and paddle tail of sea snakes; shallow water.

(7, 128, 182, 195, 354, 365, 372, 541, 592); (86, as *Dichelaspis grayi*); (86, as *Dichelaspis pellucida*).

***Octolasmis lowei* (Darwin, 1852)**

*Dichelaspis Lowei* Darwin, 1852: 128, pl. 2 fig. 8.

*Dichelaspis sinuata* Aurivillius, 1894: 17, pl. II figs. 3–5.

*Dichelaspis trigona* Aurivillius, 1894: 19, pl. II fig. 8.

*Dichelaspis mülleri* Coker, 1902: 401.

*Octolasmis mülleri*. — Pilsbry, 1907a: 95, fig. 32c.

*Octolasmis lowei*. — Nilsson-Cantell, 1927: 766, fig. 10.

*Octolasmis lowei f. lowei*. — Hiro, 1937d: 94.

*Octolasmis uncus* Pearse, 1951: 369, fig. 77k.

*Octolasmis brevis* Pearse, 1951: 370, fig. 77j.

*Octolasmis lowei mülleri*. — Pilsbry, 1953: 14.

*Octolasmis californiana* Newman, 1960b: 9, pl. 2.

*Octolasmis (Octolasmis) lowei f. trigona*. — Rosell, 1972: 167.

*Octolasmis trigona*. — Jones et al., 2000: 244.

**Distribution.** Atlantic Ocean; Indo-west Pacific: Indian Ocean; Australia; Malay Arch.; S China Sea; E China Sea; Taiwan; Japan; gill chambers of decapod crustaceans; shallow water to 500 m.

(194, 218, 222, 349, 365, 372, 440, 592); (86, as *Dichelaspis lowei*); (23, as *Dichelaspis sinuata*); (23, as *Dichelaspis trigona*); (128, as *Dichelaspis lowei*); (128, as *Dichelaspis darwinii*); (128, as *Dichelaspis sinuata*); (334, as *Octolasmis californiana*); (442, as *Octolasmis (Octolasmis) lowei f.*

*trigona*); (541, as *O. trigona*); (Liu & Ren, 2007; Chan, Prabowo & Lee, 2009b).

#### *Octolasmis neptuni* (MacDonald, 1869)\*

*Paradolepas neptuni* MacDonald, 1869: 440, fig. 1, pl. XXXIII figs. 1–3, pl. XXXIV figs. a–h.

*Dichelaspis neptuni*. — Gruvel, 1905a: 127, fig. 147. — Hoek, 1883: 32.

*Dichelaspis vaillantii* Gruvel, 1900a: 109. — Gruvel, 1902a: 279, pl. IV figs. 5–13.

*Dichelaspis sinuata*. — Annandale, 1909a: 121 (part., non *D. sinuata* Aurivillius, 1894).

*Octolasmis lowei*. — Nilsson-Cantell, 1927: 766, pl. 10 (part.).

*Octolasmis lowei f. neptuni*. — Hiro, 1937c: 425, fig. 13E–H, 15.

*Octolasmis neptuni neptuni*. — Newman, 1961b: 100, pl. 21, figs. 1–9.

*Octolasmis neptuni hiroi*. — Newman, 1961b: 102.

*Octolasmis neptuni neptuni*. — Zevina, 1982: 54, fig. 45.

*Octolasmis neptuni*. — Dong et al., 1982: 78, fig. — Zevina et al., 1992: 25, fig. 14.

**Distribution.** Indo-west Pacific: Suez; S and E Africa; Australia; **Singapore**; Vietnam; Hong Kong; S China Sea; E China Sea; Yellow Sea; Bohai Sea; Taiwan; S Japan; Korea; gill chambers of decapod crustaceans (e.g., *Charybdis japonica* (A. Milne-Edwards, 1861); *C. natator* (Herbst, 1794); *Dromia dehaani* Rathbun, 1923 (now *Lauridromia dehaani* (Rathbun, 1923)), *Myomenippe hardwickii* (Gray, 1831); *Panulirus stimpsoni* Holthuis, 1963; *Podophthalmus vigil* (Fabricius, 1798); *Portunus pelagicus* (Linnaeus, 1758); *P. trituberculatus* Miers, 1870, *Ovalipes punctatus* (de Haan, 1833); *Thalamita crenata* Rüppell, 1830; *Thenus orientalis* (Lund, 1793); 12–300 m.

(95, 96, 113b, 205, 222, 303, 535, 537, 541, 580, 592); (309a, as *Paradolepas neptuni*); (7, as *Dichelaspis sinuata* (part.)); (27, as *Dichelaspis neptuni* (part.)); (123, 128, as *Dichelaspis vaillantii*); (23, 123, 128, as *Dichelaspis neptuni*); (182, 194, as *Octolasmis lowei* forma *neptuni*); 27, as *Octolasmis neptuni* (part.)); (336, as *Octolasmis*(*Octolasmis*) *neptuni neptuni*); (Leung & Jones, 2000; Liu & Ren, 2007; Chan, Prabowo & Lee, 2009c).

#### *Octolasmis nierstraszi* (Hoek, 1907)

*Dichelaspis nierstraszi* Hoek, 1907a: 21, pl. II figs. 1–7.

*Octolasmis nierstraszi*. — Nilsson-Cantell, 1921: 268. — Zevina et al., 1992: 27, fig. 16.

*Dichelaspis* (*Octolasmis*) *nierstraszi*. — Stubbings, 1936: 8.

**Distribution.** Indo-west Pacific: Red Sea; E Africa (off Mombasa); Indian Ocean; Gulf of Aden; Muskat, Persian Gulf; Gulf of Aden; Maldives; Bay of Bengal; Australia; Indonesia; Malay Arch.; S China Sea; E China Sea; Philippines; Taiwan; S Japan; attached to gorgonians, hydroids; 22–675 m.

(44, 182, 183, 205, 303, 347, 349, 364, 365, 372, 451, 534, 535, 541, 579, 580, 592); (196, as *Dichelaspis nierstraszi*); (492, as *Dichelaspis* (*Octolasmis*) *nierstraszi*); (Zevina et al.,

1992; Liu & Ren, 2007; Poltarukha & Zvyagintsev, 2008; Chan, Prabowo & Lee, 2009b).

#### *Octolasmis orthogonia* (Darwin, 1852)

*Dichelaspis orthogonia* Darwin, 1852: 130, pl. II fig. 10a, b.

*Dichelaspis versluysi* Hoek, 1907a: 28, pl. III figs. 8–13.

*Octolasmis* (*Dichelaspis*) *orthogonia*. — Pilsbry, 1907a: 94.

*Octolasmis orthogonia*. — Krüger, 1911b: 462. — Dong et al., 1982: 79, fig. — Zevina et al., 1992: 26, fig. 15. — Chan, 2009: 68, figs. 2 B, 17 A–F.

**Distribution.** Indo-west Pacific: E and S African Coast; Indian Ocean; Australia; Indonesia; Malay Arch.; Vietnam; S China Sea; E China Sea; Philippines; Taiwan; S Japan; attached to hydroid, gorgonians, antipatharians, sea urchin spines, nylon cord, sometimes fouling; 14–818 m.

(44, 95, 96, 185, 194, 205, 303, 348, 350, 372, 400, 431, 451, 496, 535, 541, 579, 580, 592); (86, 128, 196, 554, as *Dichelaspis orthogonia*); (27, 169b, 183, 279, 537, as *Octolasmis weberi* Hoek); (39, 169b, as *Octolasmis orthogonia*); (182, as *Octolasmis weberi pennatulae* Hiro); (196, as *Dichelaspis weberi*); (196, as *Dichelaspis versluysi*); (449, as *Octolasmis* (*Dichelaspis*) *orthogonia*); (Zevina et al., 1992; Liu & Ren, 2007; Poltarukha & Zvyagintsev, 2008; Chan, 2009; Chan, Prabowo & Lee, 2009b).

#### *Octolasmis tydemanni* (Hoek, 1907)

*Dichelaspis tydemanni* Hoek, 1907a: 24, pl. II figs. 8–13.

*Octolasmis tydemanni*. — Zevina, 1982: 60, fig. 51.

**Distribution.** Malay Arch.; Gulf of Thailand (Koh Cheun); 10–55 m.

(9, 196, 592).

#### *Octolasmis warwickii* (Gray, 1825)\*

*Octolasmis warwickii* Gray, 1825: 100. — Gray, 1830: pl. VI fig. 16. — Barnard, 1924: 58. — Dong et al., 1982: 78, fig. — Zevina et al., 1992: 26, fig. 17.

*Dichelaspis warwickii*. — Darwin, 1852: 120, pl. II fig. 6a, b.

*Dichelaspis warwickii*. — Aurivillius, 1894: 14, pl. VIII figs. 26, 27.

*Dichelaspis equina* Lanchester, 1902: 385, pl. XXXV figs. 7a–d.

**Distribution.** Indo-west Pacific: S Africa (Amatikulu R., Durban); Persian Gulf; Indian Ocean; Australia; Java Sea (near Batavia); Borneo; **Singapore**; Malay Arch.; Cambodia; Gulf of Thailand; Vietnam; Condor Is; Bay of Nhatrang; Bich Damm and Ile Tre, Nhatrang; Quin-bon (Annam); Lien Chien, Tourane; Hongay, Tonkin; Hong Kong; China; S China Sea; E China Sea; Philippines; Taiwan; Tanane Bay, S Japan; attached to antipatharians, and to carapace and appendages of a variety of decapod crustaceans (e.g., *Arcana septemspinosa* Fabricius, 1787; *Charybdis bimaculata* (Miers, 1886); *Dorripe granulata* (De Haan, 1841) (= *Paradorripe granulata* (De Haan, 1841)); *D. frascione* (Herbst, 1785), *Leucosia craniolaris* (Linnaeus, 1758); *Portunus pelagicus* (Linnaeus, 1758); *Panulirus stimpsoni* Holthuis, 1963); 14–100 m.

(9, 27, 44, 95, 96, 113b, 182, 183, 205, 218, 222, 225, 226, 303, 348, 350, 364, 365, 372, 440, 541, 565, 579, 580, 592, 594); (7, 23, 86, 118, 128, as *Dichelaspis warwickii*); (3, 4, 291, as *Dichelaspis equina*); (Leung & Jones, 2000; Liu & Ren, 2007; Poltarukha & Dautova, 2007; Poltarukha & Zvyagintsev, 2008; Chan, Prabowo & Lee, 2009b).

***Octolasmis weberi weberi* (Hoek, 1907)**

*Dichelaspis weberi* Hoek, 1907a: 26, pl. III figs. 2–7.  
*Octolasmis weberi*. — Barnard, 1924: 60.  
*Octolasmis (Dichelaspis) weberi*. — Rosell, 1981: 279, pl. 8 figs. p–s.  
*Octolasmis weberi weberi*. — Zevina, 1982: 62, fig. 54.

**Distribution.** Indo-west Pacific: S Africa; Banda Sea, Indonesia; S China Sea; Malay Arch.; Philippines; S Japan; attached to gorgonians, hydroids; 73–560 m.

(27, 169b, 194, 449, 451, 535, 537, 541, 592); (196, as *Dichelaspis weberi*); (450, as *Octolasmis (Dichelaspis) weberi*).

***Octolasmis weberi pennatulae* Hiro, 1937**

*Octolasmis (Dichelaspis) weberi* Krüger, 1911b: 462, pl. III fig. 27.  
*Octolasmis orthogonia*. — Broch, 1922: 279. — 1931: 38 (part.).  
*Octolasmis weberi pennatulae*. — Hiro, 1937c: 415, fig. 12.

**Distribution.** Malay Arch.; Japan; attached to stem of pennatulids, hydroids; shallow water (20 m).

(182, 592); (39, as *Octolasmis orthogonia*); (44, as *Octolasmis orthogonia* (part.)); (279, as *Octolasmis weberi*).

***Octolasmis* sp. a\***

*Octolasmis* sp. a Jeffries et al., 1982: 564, 566.

**Distribution.** Singapore; attached to carapace and gills of a variety of decapod crustaceans (e.g., *Charybdis feriata* (Linnaeus, 1758); *C. natator* (Herbst, 1794); *Calappa philargius* Linnaeus, 1758; *Podophthalmus vigil* (Fabricius, 1798); *Portunus pelagicus* (Linnaeus, 1758); *P. sanguinolentus* (Herbst, 1793); *Thalamita crenata* Rüppell, 1830; *T. spinimana* Dana, 1852; *Thenus orientalis* (Lund, 1793)); shallow water.

(222).

***Octolasmis* sp. b\***

*Octolasmis* sp. b Jeffries et al., 1982: 564, 566.

**Distribution.** Singapore; attached to decapod crustaceans, e.g., *Galene bispinosa* (Herbst, 1794), *Matuta lunaris* (Forskäl, 1775); shallow water.

(222).

***Octolasmis* sp. c\***

*Octolasmis* sp. c Jeffries et al., 1982: 564, 566.

**Distribution.** Singapore; attached to body and gills of decapod crustaceans, e.g., *Scylla serrata* (Forskäl, 1755); *Thalamita crenata* Rüppell, 1830; *T. sima* H. Milne Edwards, 1834); shallow water.

(222).

**Genus *Trilasmis* Hinds, 1844**

*Trilasmis* Hinds, 1844: 71.  
*Poecilasma* Darwin, 1852: 99 (part.).

Type species *Trilasmis eburnea* Hinds, 1844: 60, pl. XXI fig. 5; type locality New Guinea.

***Trilasmis eburnea* Hinds, 1844**

*Trilasmis eburnea* Hinds, 1844: 60, pl. XXI fig. 5.  
*Poecilasma eburnea*. — Darwin, 1852: 112, pl. II fig. 5, pl. X fig. 15.  
*Poecilasma eburneum*. — Hoek, 1907a: 15, pl. X figs. 6, 7.  
*Poecilasma (Trilasmis) eburneum*. — Annandale, 1909a: 94.  
*Trilasmis (Trilasmis) eburnea*. — Hiro, 1937d: 81, fig. 66.

**Distribution.** Widely distributed in Indo-west Pacific: Indian Ocean: Australia; Indonesia; Malay Arch.; Gulf of Thailand; S China Sea; China; Philippines; S Japan; New Zealand; New Guinea; Hawaii; attached to echinoids (e.g., *Stylocidaris annulosa* Mortensen, 1927; *Prionocidaris bispinosa* (Lamarck, 1816); *Salmacis virgulata* L. Agassiz in L. Agassiz & Desor, 1846); 2–914 m.

(9, 158, 205, 303, 365, 372, 451, 592); (7, as *Poecilasma (Trilasmis) eburneum*); (86, 115, as *Poecilasma eburnea*); (185, as *Trilasmis (Trilasmis) eburnea*); (196, as *Poecilasma eburneum*); (396, as *Trilasmis eburneum*); (Liu & Ren, 2007).

**FAMILY LEPADIDAE Darwin, 1852**

Lepadidae Darwin, 1852: 8 (part.).  
 Pentaspidae Gruvel, 1905a: 8, 102 (part.; rejected by Pilsbry, 1907a because family group name not derived from generic name).  
 Anaspidae Gruvel, 1905a: 8, 157 (part.; rejected by Pilsbry, 1907a because family group name not derived from generic name).  
 Lepadinae. — Gruvel, 1905a: 104.  
 Alepadinae. — Gruvel, 1905a: 157.

**Genus *Alepas* Sander-Rang, 1829**

*Alepas* Sander-Rang, 1829: 364.  
*Gymnolepas Aurivillius*, 1894: 33 (non *Gymnolepas* Blainville, 1824).  
*Eremolepas* Weltner, 1897: 239.

Type species *Alepas univalvis* Quoy & Gaimard, 1827: 234, pl. VII fig. 8, 8a; type locality Strait of Gibraltar.

***Alepes pacifica* Pilsbry, 1907**

*Alepes pacifica* Pilsbry, 1907a: 105, fig. 36, pl. 5 figs. 1, 2, 4–6.  
— Dong et al., 1982: 76, fig. — Zevina et al., 1992: 18, fig. 9.  
*Alepes investigator* Annandale, 1914: 276, pl. XXXIII, pl. XXXIV  
fig. 2.

**Distribution.** Tropical Indo-west Pacific: Indian Ocean; Australia; Malaysia; Hong Kong; S China Sea; E China Sea; Pacific Ocean from Japan and California to Tasmania and northern New Zealand; S Atlantic; attached to medusae (*Cyanea nozzakii* Kishinouye, 1891; *Discomedusa* sp.); pelagic.

(17, 95, 96, 112a, 182, 183, 205, 303, 347, 348, 365, 392, 509, 520, 522, 534, 579, 580, 592); (Zevina et al., 1992; Leung & Jones, 2000; Liu & Ren, 2007; Poltarukha & Zvyagintsev, 2008).

**Genus *Conchoderma* Olfers, 1814**

*Lepas* Linnaeus, 1767: 1110 (part.).  
*Conchoderma* Olfers, 1814: 177.

Type species *Lepas virgata* Spengler, 1790: 207, pl. VI fig. 9; type locality unknown.

***Conchoderma auritum* (Linnaeus, 1767)**

*Lepas aurita* Linnaeus, 1767: 1110. — Wood, 1815: 70, pl. 4 (pessima).  
*Lepas leporina* Poli, 1795: pl. VI fig. 21.  
*Conchoderma auritum*, *C. leporinum*. — Olfers, 1814: 177.  
*Branda aurita*. — Oken, 1815: 362.  
*Otione Blainvillii* Leach, 1817: 66. — Leach, 1824: 170, pl. lvii, fig. dextra.  
*Otione Cuvieri* Leach, 1817: 67. — Leach, 1824: 170, pl. lvii, fig. centralis.  
*Malacotta bivalvis* Schumacher, 1817: 98.  
*Otione Cuvieranus*, *O. Bellianus*, *O. Blainvillianus*, *O. Dumerillianus*, *O. Rissoanus* Leach, 1824: 168.  
*Gymnolepas cuvierii* Blainville, 1824: pl. 1 fig. 1.  
*Otione depressa*, *O. sacculifera* Coates, 1829: 132.  
*Cineras cranchianus* Leach, 1825: 212.  
*Conchoderma aurita*. — Darwin, 1852: 141, pl. III fig. 4–4c., pl. IX figs. 3, 5.  
*Conchoderma coronarium* Gerstäcker in Bronn, 1865–1879: 535.  
*Otione simpsoni* Dall, 1872: 301.  
*Conchoderma auritum* (a). — Weltner, 1897: 240.  
*Conchoderma auritum*. — Dong et al., 1982: 74, fig.

**Distribution.** Cosmopolitan in all seas (e.g., S China Sea, E China Sea; Yellow Sea; Taiwan); usually attached to cirripede *Coronula diadema* (Linnaeus, 1767) attached to whales, fouling ships, driftwood, hard substrata; pelagic.

(40, 86, 95, 96, 112a, 182, 192, 194, 205, 292, 294, 378, 392, 401, 430, 433, 505, 592); (299, as *Lepas aurita*); (Liu & Ren, 2007; Chan, Prabowo & Lee, 2009b).

***Conchoderma hunteri* (Owen, 1830)**

*Cineras hunteri* Owen, 1830: 71.  
*Conchoderma Hunteri*. — Darwin, 1852: 153, pl. III fig. 3.  
*Conchoderma virgatum* var. *Hunteri*. — Annandale, 1909a: 82. — Krüger, 1911a: 26, figs. 20–22, pl. 3.  
*Conchoderma virgatum* var. *japonica*. Krüger, 1911a: 27, pl. 3 fig. 23.  
*Conchoderma virgatum* forma *hunteri*. — Broch, 1931: 28. — Nilsson-Cantell, 1938b: 2.  
*Conchoderma virgatum hunteri*. — Hiro, 1937a: 63. — 1937b: 402, fig. 6. — Dong et al., 1982: 75, fig.  
*Conchoderma virgatum hunteri*. — Hiro, 1937b: 402, fig. 6.  
*Conchoderma hunteri*. — Chan, 2009: 71, figs. 2 D, 19 A–J.

**Distribution.** Indo-west Pacific: Indian Ocean; Australia; Banda Sea; Malay Arch.; S China Sea; E China Sea; Yellow Sea; Yellow Sea; Philippines; Taiwan; S Japan; to mid Pacific Ocean; fouling animate and inanimate objects; pelagic.

(86, 128, 205, 303, 433); (382, as *Cineras Hunteri*); (7, 279, as *Conchoderma virgatum* var. *Hunteri*); (44, 372, as *Conchoderma virgatum* forma *Hunteri*); (95, 96, 115, 182, 183, 194, 534, 535, 537, as *Conchoderma virgatum hunteri*); (279, as *Conchoderma virgatum* var. *japonica*); (Liu & Ren, 2007; Chan, Prabowo & Lee, 2009b).

***Conchoderma virgatum virgatum* (Spengler, 1790)**

*Lepas virgata* Spengler, 1790: 207, pl. VI fig. 9.  
*Lepas coriacea* Poli, 1795: pl. VI fig. 2  
*Conchoderma virgatum* (a) . — Olfers, 1814: 117.  
*Branta virgate*. — Oken, 1815: 362.  
*Senoclitia fasciata* Schumacher, 1817: 98.  
*Cineras cranchii*, *C. olfersii* Leach, 1818: 412.  
*Cineras vittata* Leach, 1824: pl. 1.  
*Pamina trilineata* (var. *monstr.*) Gray, 1825: 100.  
*Cineras megalepis*, *C. montagui*, *C. rissoanus* Leach, 1825: 208.  
*Cineras vittatus*. — Brown, 1844: pl. LI figs. 16–18.  
*Conchoderma virgata*. — Darwin, 1852: 146, pl. III fig. 2, pl. IX fig. 4, 4 a–n, pl. X fig. 16.  
*Conchoderma virgatum*. — Dong et al., 1982: 75, fig. — Zevina et al., 1992: 16, fig. 8.

**Distribution.** Cosmopolitan in tropical and temperate seas: Indian Ocean; N Australia; Malay Arch.; Gulf of Thailand; Vietnam; S China Sea; Yellow Sea; Philippines; Taiwan; Japan; fouling species, attached to ships and driftwood, as well as to various animals such as fishes, sea-snakes, decapod crustaceans, and parasitic copepod *Penella* sp.; pelagic.

(7, 27, 28, 40, 46, 86, 95, 96, 112a, 128, 136, 140, 176, 181, 182, 183, 192, 194, 195, 205, 228, 283, 303, 344, 347, 350, 355, 378, 392, 433, 450, 470, 487, 492, 501, 505, 520, 535, 537, 556, 586, 592); (484, as *Lepas virgata*); (Zevina et al., 1992; Liu & Ren, 2007; Poltarukha & Zvyagintsev, 2008; Chan, Prabowo & Lee, 2009b).

**Genus *Dosima* Gray, 1825**

*Dosima* Gray, 1825: 100.

Type species *Lepas fascicularis* Ellis & Solander, 1786: 197, pl. 15 fig. 5; type locality unknown.

***Dosima fascicularis* Ellis & Solander, 1786**

*Lepas fascicularis* Ellis & Solander, 1786: 197, pl. 15 fig. 5. — Darwin, 1852: 92, pl. 1 fig. 6.  
*Lepas fascicularis aurivillii* Nilsson-Cantell, 1921: 238, fig. 40b.  
*Lepas cygnea* Spengler, 1790: pl. 6 fig. 8.  
*Pentalasmis spirulicola*, *P. donovani* Leach, 1818: 413.  
*Dosima fascicularis*. — Gray, 1825: 100.  
*Pentalasmis fascicularis*. — Brown, 1844: pl. 51 fig. 2.  
*Lepas (Dosima) fascicularis*. — Jones et al., 1990: 8.  
*Dosima fascicularis*. — Zevina, 1982: 21, fig. 11.

**Distribution.** Cosmopolitan in tropical and temperate seas; barnacle produces its own float (often associated with *Physalia physalis* Linnaeus, 1758 and *Janthina communis* Lamarck, 1822); pelagic.

(118, 234, 293, 484, 592); (40, 86, 100, 112a, 182, 194, 347, 365, 392, 505, 516, 522, 534, 535, as *Lepas fascicularis*); (147, 347, as *Lepas fascicularis aurivillii*); (Leung & Jones, 2000).

**Genus *Lepas* Linnaeus, 1758**

*Lepas* Linnaeus, 1758: 667 (part.). — Darwin, 1852: 67.

Type species *Lepas (Anatifa) anatifera* Linnaeus, 1758; type locality unknown.

**Subgenus *Anatifa* Bruguière, 1789**

*Anatifera* Meuschen, 1787: 476 [in Gevers & Meuschen, 1787].  
*Anatifa* Bruguière, 1789: XII, 60.

Type species *Lepas (Anatifa) anatifera* Linnaeus, 1758; type locality unknown.

***Lepas (Anatifa) anatifera* Linnaeus, 1758**

*Lepas anatifera* Linnaeus, 1758: 668. — Dong et al., 1982: 73, fig. — Zevina et al., 1992: 12, fig. 5. — Chan, 2009: 73, figs. 2C, 18A–M.  
*Pentalasmis laevis* Blainville, 1825: 594, pl. 84 fig. 3.  
*Anatifa engonata* Conrad, 1837: 262, pl. XX fig. 15.  
*Anatifa laevis*. — Chenu, 1847: 350, fig. 121b.  
*Lepas anatifera anatifera*. — Newman, 1972: 36.  
*Lepas (Anatifa) anatifera*. — Zevina, 1982: 17, fig. 8.  
*Lepas (Anatifa) anatifera anatifera*. — Jones, 2012: 370.

**Distribution.** Cosmopolitan in tropical, sub-tropical and temperate seas: E Africa; Madagascar; India; Seychelles; Sri Lanka; Australia; Straits of Malacca; Java Sea; Malay Pen.; Ream (Cambodia); Gulf of Thailand; Vietnam; S China Sea; E China Sea; Yellow Sea; Taiwan; Philippines; S Japan; Raoul I.; Kermadec Is; attached to floating animate and inanimate objects, fouling species; pelagic.

(592); (7, 21, 40, 44, 86, 95, 96, 112a, 115, 128, 146, 165, 181, 182, 183, 194, 195, 205, 228, 279, 291, 298, 299, 303,

338, 347, 349, 372, 390, 392, 433, 487, 501, 505, 512, 520, 522, 534, 535, 537, 579, 580, 596, as *Lepas anatifera*); (Zevina et al., 1992: 12; Liu & Ren, 2007; Poltarukha & Dautova, 2007; Poltarukha & Zvyagintsev, 2008; Chan, 2009; Chan, Prabowo & Lee, 2010; Jones, 2012).

***Lepas (Anatifa) anatifera striata* (de Graaf, 1952)**

*Anatifa striata* Bruguière, 1789: 64 (part.).  
*Lepas anatifera nonfurcata* Nilsson-Cantell, 1927: 752, fig. 5, pl. 1 fig. 1.  
*Lepas anatifera* var. *striata*. — de Graaf, 1952: 3.  
*Lepas anatifera striata*. — Newman, 1972: 34.  
*Lepas (Anatifa) anatifera* var. *striata*. — Jones et al., 1990: 7.

**Distribution.** Australia (N); Hong Kong; China; attached to floating animate and inanimate objects, fouling species; pelagic.

(116b, as *Lepas anatifera* var. *striata*), (205, as *Lepas anatifera striata* de Graef); (234, 338, 349); (Leung & Jones, 2000).

***Lepas (Anatifa) anserifera* Linnaeus, 1767**

*Anatifa striata* Bruguière, 1789: pl. 166 fig. 3.  
*Lepas anserifera* Linnaeus, 1767: 1109. — Dong et al., 1982: 73, fig. — Zevina et al., 1992: 14, fig. 6.  
*Pentalasmis anseriferus*. — Brown, 1844: pl. 51 fig. 1.  
*Lepas anserifera anserifera*. — Newman, 1972: 31, fig. 1.  
*Lepas (Anatifa) anserifera*. — Zevina, 1982: 14, fig. 4.

**Distribution.** Cosmopolitan in tropical and temperate seas; attached to floating animate and inanimate objects, fouling species; pelagic.

(7, 9, 86, 95, 96, 113b, 115, 128, 182, 183, 192, 193, 194, 195, 205, 211, 299, 303, 338, 347, 350, 363, 364, 365, 372, 392, 444, 505, 512, 516, 520, 522, 528, 534, 580, 592, 594); (Brown, 1844; Zevina et al., 1992; Leung & Jones, 2000; Liu & Ren, 2007; Poltarukha & Zvyagintsev, 2008).

***Lepas (Anatifa) hillii* (Leach, 1818)**

*Pentalasmis hillii* Leach, 1818: 413.  
*Lepas hillii*. — Darwin, 1852: 77, pl. 1 fig. 2.  
*Lepas hillii* var. *striolata* Fischer, 1884: 355.  
*Lepas (Anatifa) hillii*. — Zevina, 1982: 14, fig. 5.  
*Pentalasmis cheloniae* Leach, 1818: 413.  
*Anatifa substriata* Conrad, 1837: 262, pl. 20 fig. 14.  
*?Anatifa tricolor* Quoy & Gaimard, 1834: 631, pl. 93 fig. 4.

**Distribution.** Cosmopolitan in all seas; attached to floating animate and inanimate objects, fouling species; pelagic.

(40, 64, 86, 108, 293, 415, 505, 522, 534, 592).

***Lepas (Anatifa) indica* Annandale, 1909**

*Lepas anatifera indica* Annandale, 1909a: 76, figs. 3, 4.  
*Lepas indica*. — Memmi, 1982: 1169, fig. 3 (part.).  
*Lepas anatifera indica*. — Daniel, 1955b: 6, pl. 2 figs. 12–15.  
*Lepas (Anatifa) indica*. — Jones, 2012: 370.

**Distribution.** Indian Ocean; Madagascar; Bay of Bengal; S China Sea; E China Sea; China; attached to floating animate and inanimate objects, fouling species; pelagic.

(7, 80, 81, 205, 303, 338, 433); (Liu & Ren, 2007; Poltarukha & Zvyagintsev, 2008; Jones, 2012).

***Lepas (Anatifa) pectinata* Spengler, 1793**

*Lepas pectinata* Spengler, 1793: 106, pl. 10 fig. 2. — Dong et al., 1982: 74, fig. — Zevina et al., 1992: 15, fig. 7.

*Pentalasmis spirulae* (var.) Leach, 1818: 413.

*Pentalasmis sulcata* Leach, 1824: pl. 57.

*Anatifa sulcata*. — Quoy & Gaimard, 1834: 538, pl. 93 figs. 18–20.

*Pentalasmis radula* (var.) et *sulcatus*. — Brown, 1844: pl. 51 figs. 3–6.

*Lepas pectinata* var. *squamosa* Fischer, 1884: 356, fig. 1.

*Lepas (Anatifa) pectinata*. — Zevina, 1982: 15.

**Distribution.** Cosmopolitan in tropical and temperate seas: Sulu Sea; Banda Sea; Tasman Sea; Ream (Cambodia); Thailand; Vietnam; Bay of Nhatrang; Bich Damm, Hongay, Bay of Along, Tonkin; S China Sea; Taiwan; Philippines; Japan; Australia; New Zealand; attached to floating animate (e.g., *Janthina communis* Lamarck, 1822) and inanimate objects, fouling species; pelagic.

(37, 39, 40, 46, 86, 95, 96, 108, 112a, 128, 182, 183, 194, 205, 228, 293, 303, 347, 372, 392, 396, 415, 440, 485, 505, 512, 516, 520, 534, 535, 537, 592); (Zevina et al., 1992; Liu & Ren, 2007; Poltarukha & Zvyagintsev, 2008; Chan, Prabowo & Lee, 2009b).

**ORDER SCALPELLIFORMES Buckeridge & Newman, 2006**

Scalpelloidea Pilsbry, 1916a:14 (nom. trans. Zevina, 1978).

Scalpelliformes Buckeridge & Newman, 2006: 22.

**SUBORDER SCALPELLOMORPHA Newman, 1987**

Scalpellomorpha Newman, 1987: 8.

**FAMILY CALANTICIDAE Zevina, 1978**

Pollicipedidae. — Gray, 1825: 101 (part.).

Calanticinae Zevina, 1978a: 1000. — Zevina, 1981: 48. — Buckeridge, 1983: 28 (part.).

Cretiscalpellinae Buckeridge, 1983: 40 (part.).

Calanticidae. — Zevina, 1987: 48.

**Genus *Calantica* Gray, 1825**

Gray, 1825: 100, 101.

Type species *Calantica homii* Gray, 1825: 100 (= *Scalpellum villosus* Leach, 1824: pl. lvii); type locality “?Eastern Seas”.

***Calantica kampeni* (Annandale, 1909)\***

*Scalpellum (Smilium) kampeni* Annandale, 1909b: 267, figs. 1–4.

*Calantica kampeni*. — Broch, 1931: 6, fig. 3a–i. — Zevina et al., 1992: 35, fig. .

**Distribution.** Indo-west Pacific: Gulf of Aden; Indian Ocean; Mergui Arch; E coast of Sumatra; Malay Arch.; **Singapore**; Cambodia; Gulf of Thailand; Vietnam; Tourane; Pacific Ocean; attached to spines of cidarids (e.g., *Prionocidaris bispinosa* Lamarck, 1816), stems of hydroids, shells; 6–225 m.

(44, 46, 372, 535, 589); (8, 9, 17, 497, as *Scalpellum (Smilium) kampeni*); (Zevina et al., 1992; Poltarukha & Zvyagintsev, 2008).

***Calantica pollicipedoides* (Hoek, 1907)**

*Scalpellum pollicipedoides* Hoek, 1907a: 60, pl. 5 figs. 9–11.

*Scalpellum (Calantica) pollicipedoides*. — Pilsbry, 1907a: 9.

*Smilium pollicipedoides*. — Pilsbry, 1908: 107.

*Calantica pollicipedoides*. — Broch, 1931: 10, fig. 4a–e.

**Distribution.** Indo-west Pacific: South Africa; Indian Ocean; S of New Guinea; Malay Arch.; Philippines; 57–190 m.

(44, 196, 372, 589); (196, as *Scalpellum pollicipedoides*); (27, 398, as *Smilium pollicipedoides*).

***Calantica quinquelatera* Hiro, 1932**

*Calantica quinquelatera* Hiro, 1932c: 469, figs. 1a–g, 5a, b, pl. 30 fig. 1a, b.

**Distribution.** Indo-west Pacific: South Africa; Indian Ocean; Malay Arch.; Philippines; Taiwan; W Pacific Ocean; intertidal rocks and crevices.

(168); (Chan, Prabowo & Lee, 2009b).

***Calantica trispinosa* (Hoek, 1883)**

*Scalpellum trispinosa* Hoek, 1883: 72, pl. VI figs. 15, 16.

*Scalpellum (Smilium) trispinosum*. — Calman, 1918b: 98.

*Scalpellum (Calantica) trispinosa*. — Weltner, 1922: 102, pl. 3 fig. 4.

*Calantica trispinosa*. — Pilsbry, 1908: 106.

**Distribution.** Java Sea; Malay Arch., Gulf of Thailand; S China Sea; E China Sea; Philippines; Japan; attached to deep-sea telegraph cables, plant matter; 35–320 m.

(58, 128, 398, 450, 451, 589); (195, as *Scalpellum trispinosum*); (44, 58, as *Scalpellum (Smilium) trispinosum*); (554, as *Scalpellum (Calantica) trispinosa*); (Liu & Ren, 2007).

**Genus *Euscalpellum* Hoek, 1907**

*Eu-scalpellum* Hoek, 1907a: 59, 65.

*Euscalpellum*. — Pilsbry, 1908: 107.

Type species *Scalpellum rostratum* Darwin, 1852: 259, pl. VI fig. 7; type locality Philippines.

***Euscalpellum rostratum* (Darwin, 1852)**

*Scalpellum rostratum* Darwin, 1852: 259, pl. VI fig. 7.  
*Scalpellum (Euscalpellum) rostratum*. — Hoek, 1907a: 65, pl. V fig. 13.  
*Euscalpellum rostratum*. — Pilsbry, 1908: 107, fig. 1e, f. — Chan et al., 2010: 3, figs. 1 B, 4 A–G.  
*Scalpellum (Smilium) rostratum*. — Annandale, 1914: 274.  
*Smilium rostratum*. — Broch, 1931: 14.

**Distribution.** Indo-west Pacific: Indian Ocean; Arabian Sea; Makassar Strait; Mergui Arch.; Kei Is; Malay Arch.; S China Sea; China; Philippines; Taiwan; attached to stems of hydroids; 13–94 m.

(205, 303, 589); (86, as *Scalpellum rostratum*); (17, as *Scalpellum (Smilium) rostratum*); (44, 372, as *Smilium rostratum*); (196, 492, as *Scalpellum (Euscalpellum) rostratum*); (398, 534, 584, as *Euscalpellum rostratum*); (Liu & Ren, 2007; Chan, Prabowo & Lee, 2009b; Chan et al., 2010).

***Euscalpellum squamuliferum* (Weltner, 1894)**

*Scalpellum squamuliferum* Weltner, 1894: 80, fig. 2.  
*Smilium squamuliferum*. — Pilsbry, 1907a: 13.  
*Euscalpellum ?squamuliferum*. — Pilsbry, 1908: 108.  
*Scalpellum (Smilium) squamuliferum*. — Annandale, 1910: 147, 151, fig. 2.  
*Scalpellum (Smilium) squamuliferum* var. *regularis* Weltner, 1922: 73.  
*Euscalpellum squamuliferum*. — Zevina, 1981: 87, fig. 58.

**Distribution.** Indian Ocean; S Arabian coast; Mergui Arch.; Malay Arch.; China; 101–3200 m.

(205, 280, 398, 589); (546a, 372, as *Scalpellum squamuliferum*); (19, as *Scalpellum (Smilium) squamuliferum*).

***Euscalpellum stratum* (Aurivillius, 1892)**

*Scalpellum stratum* Aurivillius, 1892: 132. — Aurivillius, 1894: 65, pl. 3 figs. 10, 11, pl. 8 fig. 8.  
*Scalpellum (Smilium) stratum*. — Pilsbry, 1907a: 13.  
*Euscalpellum stratum*. — Krüger, 1911a: 17. — Hiro, 1931: 18, figs. 2 a–e, 3 a, b.  
*Euscalpellum squamosum*. — Hiro, 1937d: 32, fig. 23.

**Distribution.** W Atlantic Ocean; Antilles Sea; S China Sea; S Japan; attached to hydroids; 91–680 m.

(169b, 205, 278; 280, 303, 408, 584, 589); (22, 23, 128, 392, as *Scalpellum stratum*); (182, 183, as *Euscalpellum squamosum*); (Liu & Ren, 2007).

**Genus *Smilium* Gray, 1825**

*Smilium* Gray, 1825: 100.  
*Protoscalpellum* Hoek, 1907a: 58 (part.).

Type species *Smilium peroni* Gray, 1825: 100; type locality Australia (WA, Bass Str.).

***Smilium acutum* (Hoek, 1883)**

*Scalpellum acutum* Hoek, 1883: 80, pl. III fig. 19, pl. VIII fig. 12.  
*Scalpellum (Smilium) acutum*. — Pilsbry, 1907a: 13. — Annandale, 1909a: 154, fig. 2.  
*Smilium acutum*. — Pilsbry, 1908: 109.

**Distribution.** Cosmopolitan in deep seas in all oceans: Pacific, Atlantic and Indian Oceans; Malay Arch.; E China Sea; Philippines; Taiwan; S Japan; Kermadec Is; attached to hydroids (e.g., *Lafoea* sp.), echinoid spines; 61–480 m.

(18, 39, 44, 58, 112a, 169b, 182, 205, 279, 284, 303, 344, 372, 398, 450, 451, 492, 522, 562, 584, 589); (128, 136, 195, 196, 347, as *Scalpellum acutum*); (12, 19, as *Smilium (Smilium) acutum*); (126, 554, as *Scalpellum longirostrum*); (554, as *Scalpellum hastatum*); (Liu & Ren, 2007; Chan, Prabowo & Lee, 2009b).

***Smilium sinense* (Annandale, 1910)**

*Scalpellum (Smilium) sinense* Annandale, 1910b: 211, pl. III fig. 3.  
*Smilium sinense*. — Krüger, 1911a: 15. — Zevina et al., 1992: 34, fig. 21.  
*Scalpellum chinense* Steenstrup, Ms [Annandale, 1910b: 211].

**Distribution.** Indian Ocean; E coast of Sumatra; Andaman Sea; Malay Arch.; Vietnam; S China Sea; E China Sea; Taiwan; 55–857 m.

(205, 303, 372, 584, 589); (10, 17, 562, as *Scalpellum (Smilium) sinense*); (Zevina et al., 1992; Liu & Ren, 2007; Chan, Prabowo & Lee, 2009b).

**FAMILY POLLICIPEDIDAE Leach, 1817**

Pollicipedidae Leach, 1817: 67.  
 Pollicipinae. — Gruvel, 1905a: 16.

**Genus *Capitulum* Gray, 1825**

*Capitulum* Gray, 1825: 101.

Type species *Lepas mitella* Linnaeus, 1758: 668; type locality unknown.

***Capitulum mitella* (Linnaeus, 1758)**

*Lepas mitella* Linnaeus, 1758: 668.  
*Capitulum mitella*. — Gray, 1825: 101. — Foster, 1980: 209.  
*Pollicipes mitella*. — Sowerby, 1833: fig. 2. — Darwin, 1852: 316, pl. VII fig. 3. — Dong et al., 1982: 69, fig. — Zevina et al., 1992: 37, fig. 23.  
*Polylepas mitella*. — Blainville, 1824: pl. 1 fig. 5.  
*Mitella mitella*. — Pilsbry, 1907a: 6.

**Distribution.** Widely distributed in warmer parts of Indo-west Pacific: Malagasy (Madagascar); Malay Pen.; Java; Ream (Cambodia); Gulf of Thailand; Vietnam; Dama Is, Condor Is.; Hong Kong; S China Sea; E China Sea; Taiwan; Philippines; S Japan (Sagami Bay, Kyushu and Ryukyu



Is; N limit is Ponsyoro Cave near Osyoro, W Hokkaido); littoral, rocky shores.

(95, 96, as *Pollicipes mitella*); 113b, 183, 212, 324, 325, 326, 329, 331, 364, 504, 516, 562, 576, 580); (298, 299, as *Lepas mitella*); (19, 39, 44, 46, 115, 165, 192, 194, 279, 505, 512, 520, as *Mitella mitella*); (86, 203, 211, 347, 355, 363, 372, 440, 442, 481, 535, 537, 580, 584, 589, as *Pollicipes mitella*); (205, as *Capitulum mitella*, and synonymies *Mitella mitella*, *Pollicipes mitella*); (392, as *Mitella mitella*); (Zevina et al., 1992; Wu, 1975; Zevina et al., 1992; Leung & Jones, 2000; Liu & Ren, 2007; Poltarukha & Dautova, 2007; Poltarukha & Zvyagintsev, 2008; Chan, Prabowo & Lee, 2009b).

#### FAMILY LITHOTRYIDAE Gruvel, 1905

Pollicipedidae Gray, 1825: 101 (part.).

Polyaspididae Gruvel, 1905a: 8 (part.; rejected by Pilsbry, 1907a because family group name not derived from generic name).

Lithotryinae Gruvel, 1905a: 8, 96.

Pollicipedidae. — Annandale, 1909a: 63 (part.).

Lithotryinae. — Zevina, 1978a: 1000. — Newman, 1979b: 154 (part.). — Zevina, 1981: 44.

Lithotryidae. — Newman, 1996: 501.

#### Genus *Lithotrya* Sowerby, 1822

*Lithotrya* Sowerby, 1822: No. 8, 13.

Type species *Lepas dorsalis* Ellis & Solander, 1786: pl. XV fig. 5; type locality unknown.

#### *Lithotrya nicobarica* Reinhardt, 1850

*Lithotrya nicobarica* Reinhardt, 1850: 1, pl. 1 figs. 13. — Zevina et al., 1992: 38, fig. 24.

*Lithotrya cauta* Darwin, 1852: 356, pl. VIII fig. 3.

*Lithotrya pacifica* Borradaile, 1900: 798, pl. 51 fig. 3, 3a.

*Lithotrya dorsalis* var. *maldivensis* Borradaile, 1903: 441.

*Lithotrya dorsalis* var. *rugata* Borradaile, 1903: 441.

*Lithotrya conica* Hoek, 1907a: 124, pl. IX figs. 10–12.

**Distribution.** Indo-west Pacific: Indian Ocean; Nicobars; Australia; Timor; Malay Arch.; Ream and Dama Is (Cambodia); Gulf of Thailand; Vietnam; Condor Is; S China Sea; Philippines; Taiwan; S Japan; Tuamotu, Caroline Is; Fiji; Paumotu Is; Christmas I.; Pacific Ocean; littoral, boring into limestone and coral reefs.

(19, 46, 151, 181, 205, 303, 347, 364, 372, 420, 442, 474, 579, 580, 584, 589); (35, 86, 128, 196, 392, as *Lithotrya pacifica*); (36, as *Lithotrya dorsalis* var. *maldivensis* & *Lithotrya dorsalis* var. *rugata*); (196, as *Lithotrya conica*); (Zevina et al., 1992; Liu & Ren, 2007; Poltarukha & Zvyagintsev, 2008; Chan, Prabowo & Lee, 2009b).

#### *Lithotrya valentiana* (Gray, 1825)

*Conchotrya valentiana* Gray, 1825: 102.

*Anatifa truncata* Quoy & Gaimard, 1834: 636, pl. XCIII figs. 12–15.

*Lithotrya valentiana*. — Darwin, 1852: 371, pl. VIII fig. 5.

*Lithotrya truncata*. — Darwin, 1852: 366, pl. IX fig. 1.

*Lithotrya (Conchotrya) valentiana*. — Annandale, 1914: 275.

*Lithotrya truncata longicaudata* Nilsson-Cantell, 1921: 216, fig. 35a.

**Distribution.** Indo-west Pacific: Indian Ocean; Australia; Java Sea; Rotti I.; Malay Arch.; Rifleman's Bank; Atoll Itu Aba; Spratly; Loaita; S China Sea; Philippines; S Japan; New Guinea; Friendly Is; Tuamotu Is; littoral; boring into limestone and coral reefs.

(17, 27, 46, 60, 151, 176, 181, 205, 303, 382, 442, 589); (118, as *Conchotrya valentiana*); (86, 128, 196, 347, 372, as *Lithotrya truncata*); (347, as *Lithotrya truncata longicaudata*); (415, as *Anatifa truncata*); (Liu & Ren, 2007).

#### FAMILY SCALPELLIDAE Pilsbry, 1907

Pollicipedidae. — Gray, 1825: 100 (part.). — Annandale, 1909a: 63 (part.).

Lepadidae Darwin, 1852: 8 (part.).

Polyaspididae Gruvel, 1905a: 8, 16 (part.; rejected by Pilsbry, 1907a because family group name not derived from generic name).

Scalpellinae Pilsbry, 1907a: 3 (part.).

Scalpellidae. — Krüger, 1911a: 7. — Zevina, 1978: 999. — Buckeridge, 1983: 27.

#### SUBFAMILY SCALPELLINAE Pilsbry, 1907

Scalpellinae Pilsbry, 1907a: 4 (part.).

Pollicipedidae. — Annandale, 1909a: 63 (part.).

Type genus *Scalpellum* Leach, 1817: 68.

#### Genus *Alcockianum* Zevina, 1978

*Alcockianum* Zevina, 1978b: 1345.

Type species *Scalpellum alcockianum* Annandale, 1905: 82; type locality Gulf of Manaar and Andaman Sea.

#### *Alcockianum alcockianum* (Annandale, 1905)

*Scalpellum alcockianum* Annandale, 1905: 82. — Annandale, 1906b: 392, pl. 1 fig. 2.

*Alcockianum alcockianum*. — Zevina, 1981: 149, fig. 106.

**Distribution.** Indo-west Pacific: Indian Ocean; Mozambique Channel; Gulf of Manaar; Bay of Bengal; Indonesia; Malay Arch.; Australia; New Zealand; SW Pacific and mid-Pacific guyots; attached gorgonians, glassy fibres of *Hyalonema* sp.; 945–1950 m.

(231, 358, 585, 589); (3, 4, 5a, 16, 19, 372, as *Scalpellum alcockianum*); (58, 350, as *Scalpellum (Scalpellum) alcockianum*); (287, 344, as *Arcoscalpellum alcockianum*).

#### Genus *Annandaleum* Newman & Ross, 1971

*Annandaleum* Newman & Ross, 1971: 122.

Type species *Scalpellum japonicum* Hoek, 1883: 67, pl. III figs. 9, 10; type locality 34°7'N, 138°0'E.

***Annandaleum gruvellii gruvellii* (Annandale, 1906)**

*Scalpellum gruvellii* Annandale, 1906b: 390.  
*Scalpellum imperfectum* Pilsbry, 1907a: 75, fig. 30, pl. IV figs. 15–18.  
*Annandaleum gruvellii*. — Newman & Ross, 1971: 122.  
*Mesoscalpellum gruvellii*. — Lakshmana Rao & Newman, 1972: 84, pl. II H–J.  
*Annandaleum gruvellii gruvellii*. — Zevina, 1981: 167: pl. 119.

**Distribution.** Atlantic Ocean; Indo-west Pacific: Indian Ocean; S China Sea; Pacific Ocean; attached to lamellibranch shells, gorgonians, *Caryophyllia* sp. and glassy fibres of *Hyalonema* sp.; 1252–2248 m.

(27, 46, 58, 205, 309b, 344, 433, 589); (5a, 16, as *Scalpellum gruvellii*); (196, as *Scalpellum chitinosum*); (196, as *Scalpellum chitinosum*); (392, as *Scalpellum imperfectum*); (287, as *Mesoscalpellum gruvellii*); (Liu & Ren, 2007).

***Annandaleum japonicum* (Hoek, 1883)**

*Scalpellum japonicum* Hoek, 1883: 67, pl. III figs. 9, 10  
*Scalpellum curiosum* Hoek, 1907a: 79, pl. VII, fig. 8a, b.  
*Scalpellum japonicum biramosum* Pilsbry, 1911a: 68, pl. XI figs. 1, 2.  
*Annandaleum japonicum*. — Newman & Ross, 1971: 122.  
*Annandaleum japonicum biramosum*. — Chan et al., 2009b: 98, fig. 80. — Chan et al., 2010: 17, figs. 2A, 14A–H, 15 A–C.

**Distribution.** Indian Ocean; Malay Arch.; Japan; Taiwan; attached to shell of opisthobranch gastropod (?*Rissoa* sp.), gorgonians, rocks; 805–6810 m.

(182, 344, 372, 400, 505, 589); (195, 393, 554, as *Scalpellum japonicum*); (196, as *Scalpellum curiosum*); (Chan et al., 2009; Chan et al., 2009b).

***Annandaleum laccadivicum laccadivicum* (Annandale, 1906)**

*Scalpellum laccadivicum* Annandale, 1906a: 393. — 1907b: pl. 1 figs. 3, 4. — 1916a, pl. VI fig. 8, pl. VIII figs. 6, 7.  
*Scalpellum laccadivicum* var. *investigatoris* Annandale, 1906a: 395.  
*Scalpellum subflavum* Annandale, 1906a: 397. — Annandale, 1907b: pl. 1 fig. 6.  
*Scalpellum polymorphum* Hoek, 1907: 80, pl. VII figs. 9–11.  
*Scalpellum molliculum* Pilsbry, 1911a: 68, pl. 11 figs. 4, 5.  
*Litoscalpellum laccadivicum*. — Newman & Ross, 1971: 108.  
*Annandaleum laccadivicum laccadivicum*. — Zevina, 1981: 170, fig. 121.

**Distribution.** Indo-west Pacific: Indian Ocean; Sumbawa, Indonesia; Malay Arch.; SW of Calatagan Pt, Taiwan; Philippines; S Japan (S of Honda I.); SW Pacific; attached to dead shells of molluscs (e.g., *Dentalium* sp., *Arca* sp.), echinoids (e.g., *Clypeaster japonica* Döderlein, 1885) and gorgonians; 234–804 m.

(451, 589); (5a, 16, 58, 169b, 182, 372, 398, 492, as *Scalpellum laccadivicum*); (5a, as *Scalpellum subflavum*); (196, 554, as *Scalpellum polymorphum*); (400, as *Scalpellum molliculum*); (Chan, Prabowo & Lee, 2009b).

***Annandaleum lambda* (Annandale, 1910)**

*Scalpellum lambda* Annandale, 1910c: 115. — 1916a: pl. VII figs. 6, 6 a; pl. VIII figs. 12–15.  
*Annandaleum lambda*. — Newman & Ross, 1971: 122.  
*Scalpellum longius* Annandale, 1913: 234.

**Distribution.** Indo-west Pacific: Indian Ocean, from off Zanzibar; Sumbawa, Indonesia; Malay Arch.; SW of Calatagan Pt, Philippines; S Japan (S of Honda I.), SW Pacific; attached to shells of bivalves (*Arca* sp.); 234–2077 m.

(231, 344, 451, 589); (11, 16, 19, as *Scalpellum lambda*); (16, 492, as *Scalpellum longius*).

**Genus *Scalpellum* Leach, 1817**

*Scalpellum* Leach, 1817: 68.  
*Strictoscalpellum* Broch, 1924a: 14.

Type species *Lepas scalpellum*, Linnaeus, 1767: 1109; type locality unknown.

***Scalpellum inerme* Annandale, 1905**

*Scalpellum inerme* Annandale, 1905: 75, fig. 1, pl. 8 fig. 1a.  
*Scalpellum stearnsii* var. *inerme*. — Annandale, 1916: 293.  
*Scalpellum stearnsii* forma *inermis*. — Broch, 1931: 17.

**Distribution.** E Indian Ocean; Australia; Malay Arch.; attached to hard substrata; 178–2117 m.

(44 as *Scalpellum stearnsii* forma *inermis*); (350, 364, 365, 372, 589); (3, as *Scalpellum inerme*); (18, 350, as *Scalpellum stearnsii* var. *inerme*).

***Scalpellum stearnsii* Pilsbry, 1890**

*Scalpellum magnum* Darwin, 1852: 18, pl. I fig. 1.  
*Scalpellum Stearnsii* Pilsbry, 1890a: 96. — Pilsbry 1890b: 441, pl. IV figs. 1–5.  
*Scalpellum calcariferum* Fischer, 1891: 116, fig.  
*Scalpellum stearnsii*. — Gruvel, 1905a: 44, fig. 46.  
*Scalpellum stearnsii* var. *gemina* and var. *robusta* Hoek, 1907a: 69, pl. VI figs. 1–12.  
*Scalpellum stearnsii*. — Pilsbry, 1907a: 14.  
*Scalpellum stearnsii* forma *typica* Broch, 1931: 16.  
*Scalpellum stearnsii*. — Chan et al., 2010: 24, figs. 2C, 18A–G.

**Distribution.** Indo-west Pacific: Indian Ocean, off Nicobar Is; Indonesia; NW & NE Australia; Java Sea; Bali Straits; Malay Arch.; Celebes; Sulu Arch.; Sulu Sea; S China Sea; E China Sea; Philippines; Taiwan; E coast of S Japan, Sagami Bay, off Hondo; attached to animate and inanimate substrata, e.g., mollusc shells (*Vermetus* sp., *Xenophora pallidulla* Reeve, 1842), anchor filaments of hexactinellid sponges, telegraph cables, carapaces of crabs, stones; 146–2117 m.

(8, 39, 44, 169b, 188, 205, 279, 321, 347, 365, 388, 389, 392, 430, 431, 449, 450, 451, 520, 589); (196, as var. *gemina* and var. *robusta*); (Liu & Ren, 2007; Chan, 2009; Chan, Prabowo & Lee, 2009b).

**SUBFAMILY ARCOSCALPELLINAE Zevina, 1978**

Arcoscalpellinae Zevina, 1978: 1346.

**Genus *Amigdoscalpellum* Zevina, 1978***Arcoscalpellum* Hoek, 1907a: 85 (part.).  
*Amigdoscalpellum*. — Zevina, 1978b: 1349.Type species *Scalpellum manum* Zevina, 1973: 843, figs. 1–7; type locality Indian Ocean, 12°18'S, 112°43'E.***Amigdoscalpellum elegans* (Hoek, 1907)***Scalpellum elegans* Hoek, 1907a: 107, pl. VIII fig. 9.  
*Amigdoscalpellum elegans*. — Zevina, 1981: 268, fig. 201. — Chan, 2009: figs. 1 F, 8 A–D.  
*Amigdoscalpellum vitreum* Rosell, 1991: 20, fig. 2E (non *Amigdoscalpellum vitreum* Hoek, 1883).**Distribution.** Indo-west Pacific: Indian Ocean; Australia; Indonesia; Malay Arch.; Taiwan; Philippines, New Zealand; mid-Pacific Ocean; attached to long spiral tube of ?tubicolous annelid, *Arca*-like bivalve; neretid-like gastropod, rocks; 640–1886 m.(231, 372, 492, 589); (196, as *Scalpellum elegans*); (Chan, 2009; Chan, Prabowo & Lee, 2009b).***Amigdoscalpellum vitreum* (Hoek, 1883)***Scalpellum vitreum* Hoek, 1883: 115, pl. V, fig. 14.  
*Scalpellum talismani* Gruvel, 1902b: 86, pl. 2 figs. 3D, 6, 7.  
*Scalpellum formosum* Hoek, 1907a: 110, pl. VIII, figs. 11, 11a. — Dong et al., 1982: 70, fig.  
*Scalpellum bellum* Pilsbry, 1908: 111 (replacement name for *Scalpellum formosum* Pilsbry, 1907a).  
? *Scalpellum vitreum*. — Utinomi, 1958a: 283.  
*Arcoscalpellum formosum*. — Newman & Ross, 1971: 60, fig. 26, pl. VIII G.  
*Arcoscalpellum vitreum*. — Newman & Ross, 1971: 87, figs. 44–47, pl. VIII E, F.  
*Arcoscalpellum vitreum*. — Foster, 1979: 58, pl. 7D, fig. 34.  
*Amigdoscalpellum vitreum*. — Foster, 1980: 529. — Zevina, 1981: 276, fig. 208.  
? *Amigdoscalpellum vitreum* Rosell, 1991: 20, fig. 2E.**Distribution.** Indo-west Pacific and NE Atlantic Ocean. Indo-west Pacific distribution: E Africa, Zanzibar Strait to Torres Strait, Australia; Malay Arch.; China; E China Sea; Philippines, S Japan; New Zealand; NE Atlantic Ocean: off Southern Carolina to off S tip of Greenland; attached to pumice; 550–6096 m.(205, 303, 374, 451, 554, 589); (126, 128, 195, 392, 522, 582, as *Scalpellum vitreum*); (112a, 344, 544, as *Arcoscalpellum vitreum*); (96, 169b, 196, 344, 347, 372, 492, 505, as *Scalpellum formosum*); (585, 589, as *Amigdoscalpellum vitreum*); (Liu & Ren, 2007).**Genus *Arcoscalpellum* Hoek, 1907***Arcoscalpellum* Hoek, 1907a: 85 (part.).Type species *Scalpellum michelottianum* Seguenza, 1876: 381, 464, pl. 6, figs. 15–25, pl. 10 fig. 26; type locality Italian Pliocene.***Arcoscalpellum ciliatum* (Hoek, 1907)***Scalpellum ciliatum* Hoek, 1907a: 90, pl. VII fig. 17.  
*Arcoscalpellum ciliatum*. — Zevina, 1981: 346, pl. 266.**Distribution.** Collected at 4°50.5' S, 127°59'E; 2081 m. (196; 589).***Arcoscalpellum michelottianum* (Seguenza, 1876)***Scalpellum michelottianum* Seguenza, 1876: 381, 464, pl. 6, figs. 15–25, pl. 10 fig. 26.  
*Scalpellum velutinum* Hoek, 1883: 96, pl. IV figs. 10, 11, pl. IX figs. 7–9.  
*Scalpellum eximium* Hoek, 1883: 100, pl. IV figs. 6, 7, pl. IX fig. 10.  
*Scalpellum sordidum* Aurivillius, 1898b: 190.  
*Scalpellum erectum* Aurivillius, 1898b: 192.  
*Scalpellum alatum* Gruvel, 1900a: 192. — Gruvel, 1902b: 57.  
*Arcoscalpellum velutinum*. — Weisbord, 1977: 273, pl. 32, figs. 1, 2.  
*Trianguloscalpellum michelottianum*. — Liu & Ren, 1985: 207, fig. 14, pl. 4 figs. 10–12.  
*Arcoscalpellum michelottianum*. — Withers, 1953: 225, pl. 37, figs. 110, pl. 64 fig. 4. — Newman & Ross, 1971: fig. 43, pl. 9B.**Distribution.** Cosmopolitan – S Atlantic Ocean (between 72° and 34°); Mediterranean; Indo-west Pacific: off SW Africa; Indian Ocean; NE and NW Australia; Malay Arch.; E China Sea; Philippines; Taiwan; mid Pacific Ocean (Johnston Atoll); Chile; Antarctic Ocean; attached to gorgonians, gastropod shells, spines of echinoids, rocks; 64–5190 m.(16, 28, 196, 205, 433); (392, 473, as *Scalpellum michelottianum*); (1, as *Scalpellum michelottianum* (part.)); (3, 5a, 14, 19, 44, 58, 126, 128, 136, 195, 349, 350, 358, 372, 392, 492, 501, 505, 580, as *Scalpellum velutinum*); (25, as *Scalpellum sordidum*); (25, 128, as *Scalpellum erectum*); (123, 126, as *Scalpellum alatum*); (195, as *Scalpellum eximium*); (231, 287, 344, 450, 451, 544, 562, 585, 589, as *Arcoscalpellum michelottianum*); (303, as *Trianguloscalpellum michelottianum*); (Liu & Ren, 2007; Chan, Prabowo & Lee, 2010).***Arcoscalpellum sociabile sociabile* (Annandale, 1905)***Scalpellum sociabile* Annandale, 1905: 77, figs. 2, 3, pl. VIII fig. 2.  
*Scalpellum pellicatum* Hoek, 1907: 91, pl. VII figs. 18a, 19.  
*Arcoscalpellum sociabile sociabile*. — Zevina, 1981: 339, fig. 259.**Distribution.** Indo-west Pacific: Indian Ocean; SE Great Nicobar I.; Bali Str., Indonesia; Banda Sea; Malay Arch.; Sulu Sea; E China Sea; Philippines; Taiwan; S Japan; 239–2050 m.(3, 44, 450, 589); (196, as *Scalpellum pellicatum*); (350, 364, 365, 372, as *Scalpellum sociabile*); (Liu & Ren, 2007; Chan, Prabowo & Lee, 2010).

**Genus *Catherinum* Zevina, 1978**

*Arcoscalpellum* Hoek, 1907a: 85 (part.).  
*Catherinum* Zevina, 1978b: 1348.

Type species *Scalpellum recurvitergum* Gruvel, 1902b: 67, pl. II fig. 3h, 21, 22; type locality Atlantic Ocean, SW of Azores.

***Catherinum trapezoideum* (Hoek, 1907)**

*Scalpellum trapezoideum* Hoek, 1907: 102, pl. VIII, fig. 6.  
*Catherinum trapezoideum*. — Zevina, 1981: 245: fig. 182.

**Distribution.** Indian Ocean; Malay Arch.; ?China; attached to black stone; 29–2796 m.

(16, 372, 554, 589); (95 as *Catherinum* sp.).

**Genus *Tarasovium* Zevina, 1978**

*Arcoscalpellum* Newman & Ross, 1971: 42 (part.).  
*Tarasovium* Zevina, 1978: 1347.

Type species *Scalpellum cornutum* Sars, 1879: 487; type locality Arctic Ocean.

***Tarasovium valvulifer* (Annandale, 1910)**

*Scalpellum valvulifer* Annandale, 1910b: 214, pl. III figs. 1, 2  
*Tarasovium valvulifer*. — Zevina, 1981: 195, fig. 136.  
*Scalpellum darwinii* Steenstrup, Ms [see Annandale, 1910b: 211].

**Distribution.** S Indian Ocean; China Sea; 22–159 m.

(372, 589); (10, as *Scalpellum valvulifer*).

**Genus *Teloscalpellum* Zevina, 1978**

*Arcoscalpellum* Hoek, 1907a: 85 (part.).  
*Teloscalpellum* Zevina, 1978b: 1350. — Zevina, 1980: 692.

Type species *Scalpellum spicatum* Zevina, 1975: 237, fig. 1 u–c; type locality Caribbean Sea; 3500 m.

***Teloscalpellum ecaudatum* (Calman, 1918)**

*Scalpellum ecaudatum* Calman, 1918b: 106, fig. 2.  
*Teloscalpellum ecaudatum*. — Zevina, 1981: 365, fig. 282. — Chan, 2009: 55, figs. 1E, 7 A–I.

**Distribution.** Java Sea, Philippines; attached to gastropods.

(58, 589); (Chan, 2009).

***Teloscalpellum gracile* (Hoek, 1907)**

*Scalpellum gracile* Hoek, 1907a: 105, pl. VIII fig. 8.  
*Teloscalpellum gracile*. — Zevina, 1981: 380, fig. 297.

**Distribution.** Flores Sea; Philippines; 1158–1674 m.

(450, 589); (196, as *Scalpellum gracile*).

***Teloscalpellum ventricosum* (Hoek, 1907)**

*Scalpellum ventricosum* Hoek, 1907a: 275 (replacement name for *Scalpellum arcuatum* Hoek, 1907a: 98, fig. 3, 3a).  
*Arcoscalpellum ventricosum*. — Newman & Ross, 1971: 86, fig. 43.  
*Teloscalpellum ventricosum*. — Zevina, 1978b: 1350. — Zevina, 1981: 383, fig. 299.  
Non *Scalpellum arcuatum* Darwin, 1852: 40.

**Distribution.** Indonesia; Taiwan, Falkland Is; 2050–2675 m (86, 196, 344, 585, 589); (Chan, Prabowo & Lee, 2009b).

**Genus *Trianguloscalpellum* Zevina, 1978**

*Arcoscalpellum* Hoek, 1907a: 85 (part.).  
Section V Pilsbry, 1907a: 47.  
*Trianguloscalpellum* Zevina, 1978b: 1349.

Type species *Scalpellum balanoides* Hoek, 1883: 129, pl. V fig. 15, pl. X fig. 11, pl. XI figs. 1–3; type locality 5°42'S, 132°25'E.

***Trianguloscalpellum annandalei* (Calman, 1918)**

*Scalpellum annandalei* Calman, 1918b: 109, fig. 3.  
*Arcoscalpellum annandalei*. — Newman & Ross, 1971: 60.  
*Trianguloscalpellum annandalei*. — Zevina, 1981: 298, fig. 225.

**Distribution.** Indian Ocean; Malay Arch.; Australia; attached to deep-sea telegraph cables; 240–2268 m.

(372, 589); (58, as *Scalpellum annandalei*).

***Trianguloscalpellum balanoides* (Hoek, 1883)**

*Scalpellum balanoides* Hoek, 1883: 129, pl. V fig. 15, pl. X fig. 11, pl. XI figs. 1–3.  
*Scalpellum gonionotum* Pilsbry, 1907b: 360. — Pilsbry, 1911a: 65, pl. IX figs. 2–4.  
*Trianguloscalpellum balanoides*. — Zevina, 1978b: 1349. — Zevina, 1981: 294, fig. 221.

**Distribution.** S of Sumatra; Indonesia; Vietnam; S China Sea; E China Sea; Philippines; Taiwan; S Japan; attached to crinoids, hydroids; 220–1097 m.

(205, 303, 451, 554, 585, 589); (39, 183, 195, 358, as *Scalpellum balanoides*); (393, 400, as *Scalpellum gonionotum*); (Liu & Ren, 2007; Chan, Prabowo & Lee, 2009b).

***Trianguloscalpellum diota* (Hoek, 1907)**

*Scalpellum diota* Hoek, 1907a: 87, pl. VII fig. 15a.  
*Trianguloscalpellum diota*. — Zevina, 1981: 315, fig. 239. — Chan, 2009: 58, figs. 1G, 9. — Chan et al., 2009: 9, figs. 1E, 7A–F, 8A–C.

**Distribution.** Indian Ocean; Indonesia; Malay Arch.; Philippines; Taiwan; attached to deep sea crinoids, sea urchin spines (e.g., *Stylocidaris renei* Döderlein, 1885); 204–1792 m.

(372, 492, 589); (196, as *Scalpellum diota*); (Chan, 2009; Chan, Prabowo & Lee, 2010).

***Trianguloscalpellum hamulus* (Hoek, 1907)**

*Scalpellum hamulus* Hoek, 1907a: 86, pl. VII figs. 14, 14 a.  
*Arcoscalpellum hamulus*. — Rosell, 1981: 281, pl. Ia–d.  
*Trianguloscalpellum hamulus*. — Zevina, 1981: 314, fig. 238.

**Distribution.** NE Australia; Johul Bank (198 km S Timor); Banda Sea; Philippines (NE Lubang I.; 14°01.7'N, 120°16.0'E); 128–1119 m; attached to cirri of crinoids and to balanomorph barnacles (*B. hawaiiensis* Pilsbry, 1916); 174–223 m.

(18, 196, 231, 589); (449, as *Arcoscalpellum hamulus*).

***Trianguloscalpellum hirsutum* (Hoek, 1883)**

*Scalpellum hirsutum* Hoek, 1883: 88, pl. IV fig. 19.  
*Arcoscalpellum hirsutum*. — Newman & Ross, 1971: 62–64, fig. 28.  
*Trianguloscalpellum hirsutum*. — Zevina, 1981: 309, fig. 233. — Chan et al., 2010: 13, figs. 1F, 9A–H.

Australia; Indonesia, Borneo, Taiwan; Antarctica; attached to gastropod shells, rocks; 1502–1965 m.

(195, 344, 589); (Chan, Prabowo & Lee, 2009b; Chan et al., 2010).

***Trianguloscalpellum regium* (W.-Thomson, 1873)**

*Scalpellum regium* Wyville-Thomson, 1873: 347 [part; description only, non figures 1, 2, = *Trianguloscalpellum ovale* (Hoek, 1883)].

*Scalpellum regium* Wyville-Thomson, 1877: 4, figs. 2, 3. — Hoek, 1883: 106, pl. IV, figs. 3–5, pl. IX, fig. 12, pl. X, figs. 1–2.

*Scalpellum molle* Aurivillius, 1898b: 191.

*Arcoscalpellum regium*. — Weisbord, 1977: 271, pl. 31, figs. 1–5.

*Trianguloscalpellum regium*. — Zevina, 1978b: 1350. — Chan et al., 2010: 13, 1G, 10A–H.

*Trianguloscalpellum regium regium*. — Zevina, 1981: 309, fig. 234.

**Distribution.** Cosmopolitan – Atlantic Ocean, Indian Ocean, Moluccas, Australia, Norfolk I. Tasman Sea, Taiwan; New Zealand, Kermadecs, Macquarie I.; Pacific Ocean; attached to rocks; 1507–6135 m.

(25, 195, 544, 585, 589); (Wyville-Thomson, 1873, 1877; Chan, Prabowo & Lee, 2010; Chan et al., 2010).

***Trianguloscalpellum rubrum* (Hoek, 1883)**

*Scalpellum rubrum* Hoek, 1883: 91, pl. IV fig. 18.  
*Trianguloscalpellum rubrum*. — Zevina, 1981: 316, fig. 240.

**Distribution.** Java Sea; Malay Arch.; China; Philippines; Japanese waters (Kagoshima Sea and Sagami Bay); attached to antipatharians, echinoid spines; 138–551 m.

(39, 58, 205, 400, 451, 589); (195, 349, 358, as *Scalpellum rubrum*).

**Genus *Verum* Zevina, 1978**

*Verum* Zevina, 1978: 1348.

Type species *Scalpellum zenkevichi* Zevina, 1972a: 44, fig. 3; type locality Pacific Ocean, 24°27'S, 70°42'E.

***Verum candidum* (Hoek, 1907)**

*Scalpellum candidum* Hoek, 1907: 119, pl. IX fig. 3a.  
*Verum candidum*. — Zevina, 1981: 233, fig. 170.

**Distribution.** Moluccas, Indonesia; Philippines; attached to antipatharian growing on fragment of sea urchin test; 204–310 m.

(451, 589); (196, as *Scalpellum candidum*).

***Verum novaezelandiae* (Hoek, 1883)**

*Scalpellum novaezelandiae* Hoek, 1883: 124, pl. V, figs. 7, 8.  
*Scalpellum Novae-Zelandiae*. — Gruvel, 1905a: 88, fig. 99.  
*Scalpellum (Scalpellum) novae-zelandiae*. — Calman, 1918b: 123.  
*Arcoscalpellum novaezelandiae*. — Foster, 1979: 65, pl. 8 D, fig. 39.  
*Verum novaezelandiae*. — Zevina, 1978b: 1348. — Zevina, 1981: 228, fig. 165. — Chan et al., 2009: 17, figs. 1I, 12A–H, 13A–D. non *Scalpellum Novae-Zelandiae*. — Gruvel, 1902b: 54, pl. 2, figs. 12–13, 15. — Gruvel, 1912: 346 (= *V. parazelandiae* Young, 1998b).

Indo-west Pacific: E Africa, Gulf of Aden, eastward to New Zealand; Philippines; Taiwan; attached to sunken wood, gorgonians, glassy spicule of hexactinellid sponges; 822–4850 m.

(16, 451, 554, 589); (58, 195, 196, as *Scalpellum novaezelandiae*); (Chan, Prabowo & Lee, 2009b).

**Genus *Weltnerium* Zevina, 1978**

*Weltnerium* Zevina, 1978b: 1347.

Type species *Scalpellum nymphocola* Hoek, 1883: 89, pl. III fig. 23, pl. IX fig. 6; type locality 60°3'N, 5°51'W.

***Weltnerium poculum* (Hoek, 1907)**

*Scalpellum poculum* Hoek, 1907: 100, pl. VIII fig. 4a.  
*Arcoscalpellum poculum*. — Rosell, 1989: 13, pl. II, m, pl. 2d–k.  
*Weltnerium poculum*. — Zevina, 1981: 209, fig. 147.

**Distribution.** Savu Sea, W of Timor, Indonesia; Philippines; attached to deep-sea sponges, hydrozoans, shells of molluscs, pumice; 441–918 m.

(589); (196, as *Scalpellum poculum*); (450, as *Arcoscalpellum poculum*); (Chan, 2009).

**ORDER SESSILIA Lamark, 1818**

**SUBORDER VERRUCOMORPHA Pilsbry, 1916**

Operculata tribe Asymetrica Gruvel, 1905a: 169.  
Verrucomorpha Pilsbry, 1916: 14 (Verrucidae sensu Darwin, 1854).

**FAMILY VERRUCIDAE Darwin, 1854**

Verrucidae Darwin, 1854: 495.

**Genus *Cristallinaverruca* Young, 2002**

*Verruca* Section D: *Altiverruca* Pilsbry, 1916: 40 (part.).  
*Verruca (Altiverruca)*. — Broch, 1931: 45 (part.). — Foster, 1979: 68 (part.).  
*Altiverruca*. — Zevina, 1987: 1813 (part.). — Buckeridge, 1994: 92 (part.). — Young, 1998a: 77 (part.).  
*Cristallinaverruca*. — Young, 2002: 32, fig. 25.

Type species *Verruca cristallina* Gruvel, 1907b: 2, pl. 1 figs. 3–4, 9–10; type locality Andaman Islands.

***Cristallinaverruca cristallina* (Gruvel, 1907)**

*Verruca cristallina* Gruvel, 1907b: 2, pl. 1 figs. 3, 4, 9, 10 (misspelt as *ristallina* for figs. 9, 10).  
*Verruca cassis* Hoek, 1913: 138, pl. XI fig. 16, pl. XII, figs. 7, 8, pl. XIII figs. 8–10.  
*Verruca cristallina* forma *laevis* Broch, 1922: 292, figs. 41a–d, 42a–c.  
*Verruca (Altiverruca) cristallina* forma *typica*. — Broch, 1931: 46.  
*Verruca (Altiverruca) cristallina*. — Ren, 1984b: 176.  
*Altiverruca cristallina*. — Buckeridge, 1994: 93, fig. 2a–h.  
*Cristallinaverruca cristallina*. — Young, 2002: 32, fig. 25.

**Distribution.** Tropical Indo-west Pacific: Indian Ocean; Andaman Is; Nicobar Is; Banda Sea, Indonesia; Malay Arch.; China; Philippines; New Caledonia; Loyalty Islands; Chesterfield Islands; Vanuatu; Wallis & Futuna Islands; attached to rocks, pebbles, pumice, bivalves, coral, glassy spicules of hexactinellid sponges; 233–2340 m.

(577); (131, 205, 352, 372, as *Verruca cristallina*); (39, as *Verruca (Altiverruca) cristallina* forma *laevis*); (44, as *Verruca cristallina* forma *laevis*); (44, as *Verruca cristallina* forma *typica*); (49, 50, as *Altiverruca cristallina*); (200, as *Verruca cassis*); (427, 450, 451, as *Verruca (Altiverruca) cristallina*); (Liu & Ren, 2007).

**Genus *Gibbosaverruca* Young, 2002**

*Verruca* Section D: *Altiverruca* Pilsbry, 1916: 40 (part.).  
*Verruca (Altiverruca)*. — Broch, 1931: 45 (part.).  
*Altiverruca*. — Zevina, 1987: 1813 (part.). — Buckeridge, 1994: 92 (part.). — Young, 1998a: 77 (part.).  
*Gibbosaverruca* Young, 2002: 19, fig. 15 (discusses species composition of *Gibbosaverruca*).

Type species *Verruca gibbosa* Hoek, 1883: 134, pl. VI figs. 17, 18, pl. XI figs. 5–9, pl. XII figs. 1–5; type locality Argentine Basin, 48°37'S, 55°17'W, 1892 m.

***Gibbosaverruca gibbosa* (Hoek, 1883)**

*Verruca gibbosa* Hoek, 1883: 134, pl. VI figs. 17, 18, pl. XI figs. 5–9, pl. XII figs. 1–5.  
*Verruca bicornuta* Pilsbry, 1916: 43, pl. 7 fig. 1a–c, pl. 8 fig. 3a, b.  
*Verruca (Altiverruca) gibbosa*. — Broch, 1931: 45. — Newman & Ross, 1971: 135, fig. 68, pl. XIV A–E.  
*Altiverruca gibbosa*. — Zevina, 1987: 1813.  
*Gibbosaverruca gibbosa*. — Young, 2002: 19.

**Distribution.** Cosmopolitan: Atlantic Ocean; Antarctic region; China; Pacific Ocean; attached to hard substrata; 500–3000+ m.

(205, 372, 577); (128, 195, 305, 403, as *Verruca gibbosa*); (44, 344, 427, 505, as *Verruca (Altiverruca) gibbosa*); (Liu & Ren, 2007).

***Gibbosoverruca navicula* (Hoek, 1913)**

*Verruca navicula* Hoek, 1913: 134, pl. XII figs. 4–6, pl. XIII figs. 5–7.  
*Verruca (Altiverruca) navicula*. — Foster, 1979: 69, fig. 41B.  
*Altiverruca navicula*. — Jones et al., 1990: 19. — Buckeridge, 1994: 100, figs. 5a–g, 16a, b. — Chan et al., 2009: 280, fig. 245a, b, fig. 246a–d, 247a–h.  
*Gibbosoverruca navicula*. — Young, 2002: 19.

**Distribution.** Indo-Malaya/W Pacific – Indonesia, Australia, Philippines; Taiwan; New Caledonia; attached to glass needles of sponges, scaphopods, coral; 573–2745 m.

(49, 112a, 200, 234); (Young, 2002; Chan, Prabowo & Lee, 2010; as *Altiverruca navicula*).

**Genus *Metaverruca* Pilsbry, 1916**

*Verruca* Section A: *Metaverruca* Pilsbry, 1916: 21.  
*Verruca (Metaverruca)*. — Broch, 1931: 41. — Foster, 1979: 68.  
*Metaverruca*. — Zevina, 1987: 1812. — Buckeridge, 1994: 108. — Young, 1998a: 80.

Type species *Verruca coraliophila* Pilsbry, 1916: 21, pl. 1 figs. 1–5; type locality between the Bahamas and Cape Fear.

***Metaverruca recta* (Aurivillius, 1898)**

*Verruca recta* Aurivillius, 1898b: 195.  
*Verruca sculpta* Aurivillius, 1898b: 197.  
*Verruca linearis* Gruvel, 1900: 243. — Gruvel, 1902b: 107, pl. 5 figs. 11, 12.  
*Verruca magna* Gruvel, 1901: 261. — Gruvel, 1902b: 109, pl. 5 figs. 1, 2.  
*Verruca halotheca* Pilsbry, 1907a: 46, pl. IV figs. 9, 10.  
*Verruca capsula* Hoek, 1913: 130, pl. XII figs. 1–3, pl. XIII figs. 1–4.  
*Verruca coraliophila* Pilsbry, 1916: 21, pl. 1 figs. 1–5.  
*Verruca (Metaverruca) cookei*. — Rosell, 1981: 299, pl. XI figs. r, s, u, v.  
*Verruca (Metaverruca) sculpta*. — Broch, 1931: 41.

*Metaverruca recta*. — Buckeridge, 1994: 116, fig. 13a–f. — Chan, 2009: 7, figs. 2E, 20A–G. — Chan et al., 2010: 36, figs. 2G, 25A–H, 26A–C.

**Distribution.** Cosmopolitan: Atlantic Ocean, S Africa; Indo-west Pacific: Australia; Indonesia; Malaysia; E China Sea; China; Philippines; Taiwan; New Zealand; New Caledonia; Fiji Is; Tuamotu Is; Hawaii; attached to bivalves, gastropod shells, sea urchins, rocks; 114–2110 m.

(205, 577); (112a, 392, as *Verruca (Metaverruca) halotheca*); (25, 44, 128, 136, 352, 372, as *Verruca sculpta*); (126, 128, as *Verruca magna*); (200, as *Verruca capsula*); (259, 392, 403, as *Verruca halotheca*); (403, as *Verruca coraliophila*); (427, as *Verruca (Metaverruca) sculpta*); (406, 451, 577, as *Verruca cookei*); (449, as *Verruca (Metaverruca) cookei*); (492, as *Verruca (Metaverruca) capsula*); (Liu & Ren, 2007; Chan, Prabowo & Lee, 2009b).

### Genus *Newmaniverruca* Young, 1998

*Verruca* Section B: *Verruca*, Group of *Verruca alba* Pilsbry, 1916: 25 (part.).

*Verruca* Section B: *Verruca*, Group of *Verruca calotheca* Pilsbry, 1916: 30 (part.).

*Verruca (Verruca)*. — Foster, 1979: 68 (part.). — Zevina, 1987: 1812 (part.). — Buckeridge, 1994: 90 (part.).

*Newmaniverruca* Young, 1998a: 77.

Type species *Verruca albatrossiana* Pilsbry, 1912: 292; 1916: 47; type locality E of Luzon, Philippines.

### *Newmaniverruca albatrossiana* (Pilsbry, 1912)

*Verruca albatrossiana* Pilsbry, 1912: 292. — 1916: 47.

*Verruca grex* Hoek, 1913: 142, pl. XI figs. 7–13, pl. XIII figs. 11–13.

*Verruca (Euverruca) albatrossiana*. — Broch, 1931: 45.

*Newmaniverruca albatrossiana*. — Young, 1998a: 77. — Chan, 2009: 74, figs. 2G, 22A–I.

*Verruca (Verruca) albatrossiana*. — Ren, 1984b: 168, fig. 2, pl. 1 (7–11).

**Distribution.** Indo-west Pacific: NW Australia; Indonesia; S China Sea; China; Philippines; attached to cidaroid spines (e.g., *Stereocidaris indica philippinensis* Mortensen, 1928); 345–620 m.

(577); (49, 50, 205, 402, 403, 601, as *Verruca albatrossiana*); (39, 44, as *Verruca (Euverruca) albatrossiana*); (200, as *Verruca grex*); (427, as *Verruca (Verruca) albatrossiana*); (Liu & Ren, 2007; Chan, 2009).

### *Newmaniverruca multicostata* (Gruvel, 1907)

*Verruca multicostata* Gruvel, 1907b: 4.

*Newmaniverruca multicostata*. — Young, 2002: 19.

**Distribution.** Indian Ocean; Malay Arch. (Malacca, 6°18'N, 90°40'E); 160 m.

(577); (131, 372, as *Verruca multicostata*).

### Genus *Rostratoverruca* Broch, 1922

*Verruca* Section B: *Verruca*, Group of *Verruca nexa* Pilsbry, 1916: 29.

*Verruca* Section *Rostratoverruca* Broch, 1922: 298.

*Verruca (Rostratoverruca)*. — Broch, 1931: 4.

*Rostratoverruca*. — Zevina, 1987: 1813.

Type species *Verruca nexa* Darwin, 1854: 522, pl. XXI fig. 5; type locality West Indies.

### *Rostratoverruca intexta* (Pilsbry, 1912)

*Verruca intexta* Pilsbry, 1912: 292. — Zullo, 1968, fig. 3D–F, pl. 5 figs. 1–4.

*Verruca conchula* Hoek, 1913: 146, pl. XI figs. 14, 15.

*Verruca (Rostratoverruca) murrayi* Stubbings, 1936: 32, fig. 14A–K.

*Verruca (Rostratoverruca) intexta*. — Rosell, 1989: 26, pl. 7F, G.

*Rostratoverruca intexta*. — Young, 1998a: 80. — Chan, 2009: 74, figs. 2F, 21A–K.

**Distribution.** Indo-west Pacific: Indian Ocean; Madagascar; Indonesia; Timor Sea; Indonesia; Malay Arch.; S China Sea; Philippines; New Caledonia; Loyalty Islands; attached to octocorals, glass sponges, corals, cidaroid spines, scalpellid barnacles, gastropods, hydrozoans; gorgonians; 40–1002 m.

(577); (349, 352, 365, 372, 402, 403, 601, as *Verruca intexta*); (49, 50, as *Rostratoverruca intexta*); (200, as *Verruca conchula*); (450, 451, as *Verruca (Rostratoverruca) intexta*); (Chan, 2009).

### *Rostratoverruca koehlerii* (Gruvel, 1907)

*Verruca koehlerii* Gruvel, 1907b: 4, pl. 1 figs. 7, 8.

*Verruca (Rostoverruca) koehlerii*. — Ren, 1984b: 170, fig. 3, pl. 1, figs. 12–14, pl. 2 figs. 1–4.

*Rostoverruca koehlerii*. — Buckeridge, 1994: 122.

**Distribution.** Indian Ocean; Madagascar; Andamans; Indonesia; S China Sea; E China Sea; Philippines; China; Taiwan; Japan; attached to cidaroid spines (e.g., *Stylocidaris annulosa* Mortensen, 1927, *S. renei* Döderlein, 1885); 100–600 m.

(205, 431, 577); (131, 132, as *Verruca koehlerii*); 200, as *Verruca conchula*); (427, as *Verruca (Rostoverruca) koehlerii*); (Liu & Ren, 2007; Chan, Prabowo & Lee, 2009b).

### *Rostratoverruca kruegeri* (Broch, 1922)

*Verruca Krügeri* Broch, 1922: 295, figs. 43, 44.

*Verruca (Rostoverruca) krügeri*. — Broch, 1931: 46.

*Verruca (Rostoverruca) krügeri* forma *multisculpta* Hiro, 1933b: 61, fig. 18, pl. 2 figs. 9, 10.

*Rostoverruca kruegeri*. — Buckeridge, 1994: 121, fig. 15a–f. — Chan et al., 2010: 36, figs. 27A–H, 28A–C.

**Distribution.** Indonesia, near Kei Is. S China Sea; E China Sea; Philippines, SW of Tukuran; Taiwan; Japan; attached to cidaroid spines; 233–590 m.

(39, as *Verruca Küugeri*); (44, 169b, as *Verruca (Rostroversu) krügeri*); (49, 50, 577, as *Rostratoversu krügeri*); (169b as *Verruca (Rostroversu) krügeri* forma *multisculpta*); (Chan et al., 2010).

**SUBORDER BALANOMORPHA Pilsbry, 1916**

Operculata tribe Symetrica Gruvel, 1905a: 189.  
Balanomorpha Pilsbry, 1916: 47 (Balanidae *sensu* Darwin, 1854).

**SUPERFAMILY PACHYLASMATOIDEA Utinomi, 1968**

Pachylasmatoidea Utinomi, 1968a: 21(nom. trans. Buckeridge, 1983. — Newman, 1987: 5. — Jones, 2000: 157).

**FAMILY PACHYLASMATIDAE Utinomi, 1968**

Pachylasmatinae Utinomi, 1968a: 21, 37.  
Pachylasmidae. — Buckeridge, 1983: 61. — Jones, 2000: 157 (emend.).

**SUBFAMILY PACHYLASMATINAE Utinomi, 1968**

Pachylasmatinae Utinomi, 1968a: 21, 37. — Jones, 2000: 163 (emend.).

**Genus *Pachylasma* Darwin, 1854**

*Pachylasma* Darwin, 1854: 475. — Jones, 2000: 185, fig. 19, tables 3, 4, 9–11.

Type species *Chthamalus giganteum* Philippi, 1836: 250; type locality Strait of Messina.

***Pachylasma integrirostrum* Broch, 1931**

*Pachylasma integrirostrum* Broch, 1931: 50, fig. 18. — Jones, 2000: 193, fig. 19, tables 9–11.  
*Hexelasma ecaudatum* Utinomi, 1968a: 31, fig. 6.

**Distribution.** Ambon, Mollucas, Indonesia; 140 m.

(44, 533); (Jones, 2000).

***Pachylasma scutistriata* Broch, 1922**

*Pachylasma scutistriata* Broch, 1922: 301, figs. 48–50.

**Distribution.** Indian Ocean; S Australia; Malaysia; S China Sea; E China Sea; S Japan; New Zealand; attached to crinoids, antipatharians; 104–2050 m.

(39, 112a, 234, 345, 349, 533); (Liu & Ren, 2007); (Jones, 2000).

**SUPERFAMILY CHTHAMALOIDEA Darwin, 1854**

Chthamaloidea Darwin, 1854 (nom. trans. Newman & Ross, 1976).

**FAMILY CHTHAMALIDAE Darwin, 1854**

Balanidae. — Gray, 1825: 104 (part.).  
Chthamalinae Darwin, 1854: 446 (part.).  
Chthamalidae. — Pilsbry, 1916: 290 (part.).

**SUBFAMILY NOTOCHTHAMALINAE Foster & Newman, 1987**

Notochthamalinae Foster & Newman, 1987: 326.

**Genus *Nesochthamalus* Foster & Newman, 1987**

*Nesochthamalus* Foster & Newman, 1987: 326.

Type species *Chthamalus intertextus* Darwin, 1854: 467, pl. XIX fig. 1a, b; type locality Philippine Archipelago.

***Nesochthamalus intertextus* (Darwin, 1854)**

*Chthamalus intertextus* Darwin, 1854: 467, pl. XIX fig. 1a, b. — Dong et al., 1982: 82, fig.  
*Euraphia intertexta*. — Newman & Ross, 1976: 41. — Zevina et al., 1992: 79, fig. 53.  
*Nesochthamalus intertextus*. — Foster & Newman, 1987: 326, fig. 3.

**Distribution.** Indonesia, Malaysia to Vietnam; China; Taiwan; Philippines; Japan; Hawaii; Pitcairn I.; littoral.

(88, 95, 115, 128, 135, 177, 200, 254, 335, 345, 347, 403, 406, 412, 507, 512, 516); (96, 111, 193, 205, 534, as *Chthamalus intertextus*); (Zevina et al.; Chan, 2007; Liu & Ren, 2007; Chan, Prabowo & Lee, 2010; Poltarukha & Zvyagintsev, 2008).

**Genus *Octomeris* Sowerby, 1825**

*Octomeris* Sowerby, 1825: 244.

Type species *Octomeris angulosa* Sowerby, 1825: 244; type locality Algoa Bay, Cape of Good Hope.

***Octomeris brunnea* Pilsbry, Darwin, 1854**

*Octomeris brunnea* Darwin, 1854: 484, pl. 20 fig. 3a, b. — Dong et al., 1982: 84, fig.  
*Octomeris intermedia* Nilsson-Cantell, 1921: 303, figs. 60, 61, pl. 3 fig. 8.  
*Octomeris crassa* Withers, 1932: 123.

**Distribution.** Indo-west Pacific: Mergui Arch.; N Australia; Indonesia; Malay Arch.; China; Taiwan; Philippines; S Japan; S Housyu (rare), Ryukyu Is (probably); New Hebrides; Santa Cruz Is; littoral.

(71, 88, 95, 96, 111, 127, 128, 166, 193, 205, 234, 345, 347, 348, 354, 357, 359, 412, 512, 516, 522); (347, as *Octomeris intermedia* n. sp.); (350, 372, as *Octomeris intermedia*); (561, as *Octomeris crassa* n. sp.); (Liu & Ren, 2007; Chan, Prabowo & Lee, 2009b).



**SUBFAMILY EURAPHIINAE Newman & Ross, 1976**

Group of *Euraphia hembeli* Nilsson-Cantell, 1921: 275.  
 Euraphiinae Newman & Ross, 1976: 36, 40. — Anderson, 1994:  
 336. — Newman, 1996: 502. — Poltarukha, 1997a: 463.  
 Non *Euraphia hembeli* group Foster & Newman, 1987: 329.

**Genus *Caudoeuraphia* Poltarukha, 1997**

*Caudoeuraphia* Poltarukha, 1997a: 464.

Type species *Chthamalus caudatus* Pilsbry, 1916: 314, fig. 92A–C, pl. 73 fig. 1, 1a, 1b; type locality Catbalonga, Samar, Philippines.

***Caudoeuraphia caudata* (Pilsbry, 1916) ■**

*Chthamalus caudatus* Pilsbry, 1916: 314, fig. 92 A–C, pl. 73 fig. 1, 1 a, 1 b. — Dong et al., 1982: 84, fig.  
*Chthamalus* sp. Withers, 1932: 122.  
*Euraphia caudata*. — Newman & Ross, 1976: 41. — Zevina et al., 1992: 80, fig. 55.  
*Caudoeuraphia caudata*. — Poltarukha, 1997a: 464.

**Distribution.** N Australia; Indonesia; W coast of Sumatra; Pisang I.; **Singapore**, Malayan Arch.; Vietnam; S China Sea; China; Philippines; Palau Is.; littoral.

(95, 101, 181, 205, 234, 254, 345, 347, 354, 403, 426, 490); (96, 412, 442, 594, as *Chthamalus caudatus*); (111, as *Chthamalus caudata*); (Zevina et al., 1992; Liu & Ren, 2007; Poltarukha & Zvyagintsev, 2008). (**Singapore**, S. Teo, pers. comm.)

**Genus *Microeuraphia* Poltarukha, 1997**

*Microeuraphia* Poltarukha, 1997b: 1112.

Type species *Lepas stellata* var. *depressa* Poli, 1791: 27, pl. 5 figs. 12–16; type locality Sicily.

***Microeuraphia withersi* (Pilsbry, 1916)\* ■**

*Chthamalus withersi* Pilsbry, 1916: 312, fig. 91a–d, pl. 73 figs. 2–2e. — Dong et al., 1982: 82, fig.  
*Euraphia withersi*. — Newman & Ross, 1976: 41. — Zevina et al., 1992: 80, fig. 54.  
*Microeuraphia withersi*. — Poltarukha, 1997b: 1116. — Poltarukha & Zvyagintsev, 2008: 81, fig. 30.

**Distribution.** Indo-west Pacific: Indian Ocean; Madagascar; India; Mergui Arch., N Australia; Indonesia; **Singapore**; W coast of Sumatra; Java; Kei Islands; Arafura Sea; Celebes; Pisang I.; Malay Arch.; Vietnam; Hong Kong; S China Sea; Kororu Is; Philippines (Cebu); littoral.

(30, 44, 95, 113b, 181, 203, 211, 234, 243, 244, 254, 330, 345, 347, 354, 357, 403, 426, 444, 497, 501, 534, 535, 542, 575, 576); (96, 205, 367, 372, 412, 442, 594, as *Chthamalus withersi*); (Zevina et al., 1992; Leung & Jones,

2000; **Singapore** Ng & Sivasothi 2001; Liu & Ren, 2007; Poltarukha & Zvyagintsev, 2008). (**Singapore**, Dr S. Teo, pers. comm.)

**SUBFAMILY CHTHAMALINAE Darwin, 1854**

Chthamalinae Darwin, 1854: 446 (part.).  
 Group of *C. stellatus* Nilsson-Cantell, 1921: 275.

**Genus *Chthamalus* Ranzani, 1817**

*Chthamalus* Ranzani, 1817: 276.

Type species *Chthamalus stellatus* Poli, 1791: .29, pl. 5 figs. 18–20; type locality unknown.

***Chthamalus malayensis* Pilsbry, 1916 \* ■**

*Chthamalus malayensis* Pilsbry, 1916: 310. — Hiro, 1939: 249. — Utinomi, 1954: 18 (including *C. moro*). — Karande & Palekar, 1963: 231. — Pope, 1965: 51–63 (including *C. moro* part.). — Newman & Ross, 1976: 42 (including *C. moro*, following Hiro, 1939: 249–251). — Dong et al., 1980: 125. — Ren, 1984: 151. — Zevina et al., 1992: 56, fig. 38. — Southward et al., 1998: 123.  
*Chthamalus stellatus*. — Hoek, 1913: 267. — Rosell, 1972: 172.  
*Chthamalus challengeri*. — Broch, 1931: 53, fig. 19. — Broch, 1947: 5.  
*Chthamalus antennatus*. — Rosell, 1972: 174.  
*Chthamalus moro* Poltarukha, 2001b: 160.  
 non *Chthamalus malayensis* Nilsson-Cantell, 1938: 31 (= *challengeri* subgroup).  
 non *Chthamalus malayensis* Stubbings, 1961: 172 (= *challengeri* subgroup).  
 non *Chthamalus moro* Karande & Palekar, 1963: 231 (used as synonym of *C. malayensis*).  
 non *Chthamalus malayensis* Poltarukha, 2001: 157 (= *challengeri* subgroup).

**Distribution.** Tropical equatorial Indo-west Pacific region: *Indo-Malayan Clade* – from East Africa, across the Indian Ocean, to Sumatra; Australia (N); Indonesia; **Singapore**; western and eastern Malay Arch.; Borneo; S Vietnam; *South China Sea Clade* – most of the coastline, including Hainan I., Vietnam, Thailand (to Samui I.), and the Philippines; *Taiwan Clade* – limited to Taiwan; *Christmas I. Clade* – restricted to Christmas I. (Indian Ocean); littoral, high shore, on rocks; also a fouling species.

**Remarks.** Southward & Newman (2003) discussed past erroneous past records of *Chthamalus moro*, *C. malayensis* and *C. challengeri*, redefining synonymies and distributions. More recently, a very clear, complete distribution range for *C. malayensis*, supported by molecular analysis, was provided by Tsang et al. (2012). They revealed four distinct molecular clades within the distributional range, Indo-Malayan, South China Sea Taiwan and Christmas Island clades. However, no absolute morphological differences were detected between the clades, suggesting that *C. malayensis* contains cryptic species (molecular but not morphologically diagnostic) in the Indo-Pacific.

(44, 95, 193, 200, 242, 345, 372, 403, 412, 426, 442, 446, 494) (Zevina et al., 1992; Poltarukha, 2001: 160–163; Southward & Newman, 2003; Southward et al., 1998: 12; **Singapore** Tsang et al., 2012 ) (**Singapore**, S. Teo, pers. comm.)

***Chthamalus moro* Pilsbry, 1916**

*Chthamalus moro* Pilsbry, 1916: 311. — Nilsson-Cantell, 1921: 277. — Broch, 1922: 307 (part.). — Hiro, 1937b: 49. — Rosell, 1972: 178. — Dong et al., 1980: 125. — Ren, 1984: 153.  
*Chthamalus malayensis*. — Utinomi, 1954: 18–21 (part.). — Karande & Palekar, 1963 (part.). — Pope, 1965 (part.) — Newman & Ross, 1976 (part.).  
non *Chthamalus moro* Broch, 1922: 307 (part.). — Broch, 1931: 56 (includes a euraphiid).  
non *Chthamalus moro* Nilsson-Cantell, 1934: 50 (a euraphiid).  
non *Chthamalus moro* Poltarukha, 2001b: 160 (= *C. malayensis*).

**Distribution.** Indonesia; Philippines; Taiwan; Xisha (Paracel) Islands, the Ryukyu Islands; Mariana Islands; Caroline Islands; Fiji; Samoa.

**Remarks.** Southward & Newman (2003) recorded *Chthamalus moro* as present in the neighbouring waters of Singapore. They discussed erroneous past records of *C. moro*, *C. malayensis* and *C. challengerii*, redefining synonymies and distributions, which are adopted above.

(as *C. moro* 39, 95, 181, 347, 403, 426, 442) (as *C. malayensis* 242, 412, 345, 516)

***Tetrachthamalus* Newman, 1967**

*Tetrachthamalus* Newman, 1967: 425.

Type species *Tetrachthamalus oblitteratus* Newman, 1967: 425, figs. 3–5; type locality Red Sea coast of Israel.

***Tetrachthamalus sinensis* Ren, 1980**

*Tetrachthamalus sinensis* Ren, 1980a: 156, pl. 1. — Ren, 1984: 158. — Zevina et al., 1992: 43, fig. 27. — Poltarukha & Zvyagintsov, 2008: 96, fig. 35.

**Distribution.** Vietnam, Hong Kong, China (Xinying, Hainan Island; Hainan I, Weizhou I., Guangzi); littoral.

(203, 205, 426, 542, 569) (Zevina et al., 1992; Poltarukha & Dautova, 2007; Poltarukha & Zvyagintsov, 2008)

**SUPERFAMILY CORONULOIDEA Leach, 1817**

Coronuloidea Leach, 1817: 68 (nom. trans. Newman & Ross, 1976).

**FAMILY CHELONIBIIDAE Pilsbry, 1916**

Chelonibiinae Pilsbry, 1916: 262. — Newman et al., 1969: 288. — Newman & Ross, 1976: 37, 43.  
Coronulidae. — Newman & Ross, 1976: 37, 43 (part.).  
Chelonibiidae. — Newman, 1993: 408.

**Genus *Chelonibia* Leach, 1817**

*Chelonibia* Leach, 1817: 68.

Type species *Lepas testudinaria* Linnaeus, 1758: 668; type locality unknown.

***Chelonibia caretta* (Spengler, 1790)**

*Lepas caretta* Spengler, 1790: 185, pl. 6 fig. 4.  
*Astroloepas testudinaria* Gray, 1825: 105.  
*Balanus chelytrypetesi* Hincks, 1840: 333.  
*Chelonobia caretta*. — Darwin, 1854: 394, pl. 14 fig. 2.  
*Chelonibia caretta*. — Pilsbry, 1916: 267, pl. 63 fig. 5a.

**Distribution.** Tropical Atlantic and Indo-west Pacific; epizoic on turtles, e.g., hawksbill turtle (*Eretmochelys imbricata* (Linnaeus, 1766)); green sea turtle (*Chelonia mydas* Linnaeus, 1758).

**Remarks.** See Remarks under *Chelonibia testudinaria* below regarding recent molecular and morphological research (Cheang et al., 2013; Zardus et al., 2014) proposing that *C. patula*, *C. testudinaria* and *C. manati* are morphotypes of the same species and should be synonymised under *C. testudinaria*. However, *Chelonibia caretta*, an hermaphroditic species, specialises on turtles and is genetically distinct.

(27, 36, 40, 80, 88, 92, 128, 181, 200, 234, 259, 278, 322, 345, 372, 403, 484, 501, 535, 545, 559, 598); (159, as *Balanus chelytrypetesi*) (Cheang et al., 2013; Zardus et al., 2014)

***Chelonibia patula* (Ranzani, 1818) ■**

*Coronula patula* Ranzani, 1818: 86, pl. 3 figs. 25–28.  
*Coronula dentulata* Say, 1822: 325.  
*Coronula denticulata* Gray, 1825: 105.  
*Astrolepas laevis* Gray, 1825: 105.  
*Chelonobia patula*. — Darwin, 1854: 396, pl. 14 figs. 3a, b, 4.  
*Chelonibia patula*. — Pilsbry, 1916: 268, pl. 63 fig. 4a. — Dong et al., 1982: 108, fig. — Zevina et al., 1992: 83, fig. 56.

**Distribution.** Tropical Atlantic to Indo-west Pacific; (**Singapore**, Vietnam, Hong Kong, Vietnam; S China Sea, Taiwan; China); epizoic on crabs, e.g., *Scylla serrata* (Forskäl, 1755), *Portunus pelagicus* (Linnaeus, 1758), *Tachypleus tridentatus* (Leach, 1819).

**Remarks.** See Remarks under *Chelonibia testudinaria* below regarding the recently proposed synonymy of *C. patula* and *C. testudinaria*.

(43, 45, 46, 54, 72, 80, 88, 92, 95, 96, 97, 113b, 114, 115, 128, 131, 135, 150, 175, 200, 205, 234, 246, 259, 278, 279, 280, 314, 345, 364, 365, 367, 372, 384, 385, 403, 406, 408, 422, 430, 455, 460, 461, 465, 478, 495, 501, 514, 522, 545, 555, 560, 593, 594, 598); (Zevina et al., 1992; **Singapore**, S. Teo, pers. comm.)

***Chelonibia testudinaria* (Linnaeus, 1758) ■**

*Lepas testudinaria* Linnaeus, 1758: 668.  
*Verruca testudinaria* Ellis, 1758, pl. 43 fig. 12.  
*Coronula patula* Ranzani, 1818: 86, pl. 3 figs. 25–28.  
*Coronula testudinaria*. — Ranzani, 1820: 13, pl. 3 figs. 5–7.  
*Coronula dentulata* Say, 1822: 325.  
*Astrolepas laevis* Gray, 1825: 105.  
*Astrolepas rotundarius* Gray, 1825: 105.  
*Chelonobia patula*. — Darwin, 1854: 396, pl. 14 figs. 3a–b, 4.  
*Chelonobia testudinaria*. — Darwin, 1854: 392, pl. 14 figs. 1a–d, 5, pl. 15 fig. 1. — Zevina et al., 1992: 84, fig. 57.  
*Chelonibia testudinata*. — Nilsson-Cantell, 1937: 95.  
*Chelonibia testudinaria*. — Pilsbry, 1916: pl. 63 figs. 1–4. — Dong et al., 1982: 108, fig.

**Distribution.** Tropical Atlantic to Indo-west Pacific; Singapore, Vietnam, Hong Kong, S China Sea, Taiwan; China; Australia; epizoic on turtles, e.g., *Chelonia mydas* (Linnaeus, 1758), *Caretta caretta* (Linnaeus, 1758) and crabs e.g., *Scylla serrata* (Forskäl, 1755), *Portunus pelagicus* (Linnaeus, 1758), *Tachylepus tridentatus* (Leach, 1819).

**Remarks.** Recent molecular and morphological evidence provided by Cheang et al. (2013) and Zardus et al. (2014) have shown little evidence to support the specific separation of *C. patula* and *C. testudinaria*. Cheang et al. (2013), from molecular and morphological evidence, proposed that *Chelonibia patula* (Ranzani, 1818) is a junior synonym of *Chelonibia testudinaria* (Linnaeus, 1758), and that *C. testudinaria/C. patula* should be regarded as a host generalist, living on a diverse range of hosts such as sea turtles, gastropods, sea snakes, etc., rather than an obligate epibiont as previously believed. Using molecular evidence to assess the species relationships, host fidelity and phylogeographic structure of four species of *Chelonibia*, Zardus et al. (2014) found that *C. patula*, *C. testudinaria* and *C. manati* are genetically indistinguishable. They concluded them to be morphotypes of the same species that should be synonymised under *C. testudinaria*. The fourth species, *Chelonibia caretta*, which is hermaphroditic and specialises on turtle, is genetically distinct.

(1, 2, 4, 27, 36, 38, 41, 43, 44, 45, 46, 54, 61, 72, 80, 88, 92, 95, 96, 108, 113b, 114, 115, 127, 128, 131, 135, 149, 150, 153, 175, 181, 182, 194, 200, 205, 234, 246, 258, 259, 267, 277, 278, 279, 280, 291, 309b, 314, 322, 345, 346, 354, 357, 362, 364, 367, 372, 384, 385, 403, 406, 408, 422, 424, 430, 455, 460, 461, 465, 478, 495, 500, 501, 512, 514, 522, 535, 536, 537, 539, 545, 546b, 549, 553, 555, 560, 593, 594, 598); (367, as *C. testudinata*); (419, as *Coronula patula*); (Zevina et al., 1992: 80; Leung & Jones, 2000; Liu & Ren, 2007; Poltarukha & Zvyagintsev, 2008; Chan, Prabowo & Lee, 2009b; Cheang et al., 2013; Zardus et al. (2014). (Singapore, S. Teo, pers. comm.)

**FAMILY PLATYLEPADIDAE Newman & Ross, 1976**

Coronulidae. — Gray, 1825: 105 (part.). — Newman & Ross, 1976: 43 (part.).  
 Coronuliinae. — Nilsson-Cantell, 1921: 370 (part.).

Platylepadinae Newman & Ross, 1976: 44.  
 Platylepadidae. — Newman, 1993: 408. — Newman, 1996: 502.

**Genus *Platylepas* Gray, 1825**

*Platylepas* Gray, 1825: 105. Monotype *Platylepas pulchra* (= *P. bissexlobata* Blainville, 1824, according to Darwin, 1854: 424).  
*Columellina* Bivona, 1832: 14. pl. 3 fig. 1.

Type species *Platylepas hexastylus* Fabricius, 1798: 35, pl. 10 figs. 1, 2; type locality, “probably from Mediterranean” (Pilsbry, 1916: 285).

***Platylepas decorata* Darwin, 1854**

*Platylepas decorata* Darwin, 1854: 429, pl. 17 figs. 2a, b.  
*Platylepas multidecorata* Daniel, 1962: 641, figs. 1, 2.  
*non Platylepas decorata*. — Nilsson-Cantell, 1921: 376, fig. 89 (= *P. ophiophilus* Lanchester, 1902).  
*Platylepas decorada*. — Ren, 1980b: 190, fig. 3 (1–9), pl. 1 figs. 11, 12, pl. 2 figs. 1–4.

**Distribution.** W Australia; S China Sea; China; Pacific Ocean, Galapagos Is; epizoic on sea snakes and turtles, e.g., *Chelonia mydas* (Linnaeus, 1758).

(88, 128, 135, 175, 179, 181, 205, 234, 278, 345, 347, 537); (424, mis-spelt as *Platylepas decorada*); (Liu & Ren, 2007).

***Platylepas hexastylus* (Fabricius, 1798)**

*Lepas hexastylus* Fabricius, 1798: 35, pl. 10 figs. 1, 2.  
*Coronula bissexlobata* Blainville, 1824: 379, pl. 117 fig. 1. — Blainville, 1825: 600, pl. 86 fig. 1 (republished).  
*Columellina bissexlobata*. — Bivona (*vide* Philippi) 1832: 14, pl. 3 fig. 1.  
*Platylepas pulchra* Gray, 1825: 105.  
*Platylepas bissexlobata*. — Darwin, 1854: 428. pl. 17 figs. 1a–d.  
*Platylepas hexastylus*. — Pilsbry, 1916: 285, pl. 67 figs. 1–1c, 3. — Chan & Hayashi 2012: 42, figs. 2F, 14A–H, 15A–H.  
*Platylepas hexastyles*. — Dong et al., 1982: 109, fig.

**Distribution.** All tropical and subtropical seas; (Vietnam; S China Sea; Taiwan; China); epizoic on turtles (e.g., *Chelonia mydas* (Linnaeus, 1758)), fish, sea-snakes, manatees and dugongs.

(30, 40, 41, 42, 80, 95, 103, 108, 112a, 127, 128, 150, 175, 179, 181, 182, 205, 234, 259, 267, 278, 281, 345, 403, 422, 424, 436, 472, 500, 501, 514, 524, 598); (88, as *P. bissexlobatai*); (Liu & Ren, 2007; Chan, Prabowo & Lee, 2009b; Chan & Hayashi, 2012).

***Platylepas ophiophilus* Lanchester, 1902**

*Platylepas ophiophilus* Lanchester, 1902: 371, pl. XXXV figs. 5a, b.  
*Cryptolepas ophiophilus*. — Krüger, 1912: 12, pl. 3 figs. 7, 8.  
*Platylepas krügeri*. — Pilsbry, 1916: 285.  
*Platylepas krügeri*. — Broch, 1931: 122.  
*Platylepas ophiopholis*. — Nilsson-Cantell, 1938b: 77.  
*Platylepas ophiophila*. — Utinomi, 1970: 360, figs. 10a–c, 11a–f.  
*Platylepas ophiopha*. — Ren, 1980b: 191.  
*Platylepas ophiophola*. — Zevina et al., 1992: 49, fig. 32.

*Platylepas hexastyles*. — Dong et al., 1980: 127.  
 ?*Platylepas decorata*. — Nilsson-Cantell, 1921: 376, fig. 89.

**Distribution.** Indo-west Pacific: Arabian Sea; India; W Australia; Indonesia; ?Malay Arch.; Thailand; Vietnam; S China Sea; Sea of Japan; epizoic on sea-snakes, e.g., *Hydrophis cyanocinctus* (Daudin, 1803).

(44, 88, 128, 175, 234, 278, 281, 291, 345, 347, 372, 454, 537); (403, renames *Cryptolepas ophiophilus* Krüger as *Platylepas krügeri*); (Zevina et al., 1992; Liu & Ren, 2007; Poltarukha & Zvyagintsev, 2008).

**Genus *Stomatolepas* Pilsbry, 1910**

*Stomatolepas* Pilsbry, 1910: 304.

Type species *Stomatolepas praegustator* Pilsbry, 1910: 304, fig. 1; type locality The Tortugas, Florida.

**Genus *Stephanolepas* Fischer, 1886**

*Stephanolepas* Fischer, 1886: 193, pl. 4 figs. 9–11.

Type species *Stephanolepas muricata* Fischer, 1886: 193, pl. 4 figs. 9–11; type locality Pulo Condor, Indochina.

***Stephanolepas muricata* Fischer, 1886**

*Stephanolepas muricata* Fischer, 1886: 193, pl. 4 figs. 9–11.

**Distribution.** Indian Ocean; Ceylon; Australia; S China Sea; epizoic on turtles.

(46, 92, 109, 127, 128, 175, 179, 234, 345, 362, 372); (Liu & Ren, 2007).

***Stomatolepas elegans* (Costa, 1838)**

*Coronula elegans* Costa, 1838: 117, pl. 1 figs. 1–3.  
*Stomatolepas elegans*. — Pilsbry, 1916: 289, pl. 68, fig. 2, 2a.

**Distribution.** Cosmopolitan; epizoic on soft skin and throat of sea turtles, e.g., epizoic on turtles, e.g., *Chelonia mydas* (Linnaeus, 1758).

(96, 112a, 175, 182, 201, 205, 345, 421, 422, 430, 500, 501, 537, 545, 602); (70, as *Coronula elegans*); (150, as *Stomatolepas praegustator*); (179, includes *S. praegustator* Pilsbry, 1916: 289 and questionably *S. transversa* Nilsson-Cantell, 1930a: 2); (354, as *Stomatolepas transversa* sp. nov.); (399, 403, as *Stomatolepas praegustator*); (Liu & Ren, 2007).

**FAMILY CORONULIDAE Leach, 1817**

Coronulidae Leach, 1817: 68. — Newman, 1993: 408, fig. 26.  
 Balaniinae Darwin, 1854: 397 (part.).  
 Coronulinae and Xenobalaninae. — Gruvel, 1905a: 8.  
 Coronulinae. — Pilsbry, 1916: 268. — Nilsson-Cantell, 1921: 370. — Newman & Ross, 1976: 37, 44.

**SUBFAMILY CORONULINAE Leach, 1817**

Coronulidae Leach, 1817: 209 (exclusive of *Chelonibia*).  
 Second section of Balaniinae Darwin, 1854: 397.  
 Coronulinae and Xenobalaninae. — Gruvel, 1905a: 8.

**Genus *Coronula* Lamarck, 1802**

*Coronula* Lamarck, 1802: 464.  
*Diadema* Schumacher, 1817: 90.  
*Polylepas* Klein. — Gray, 1825: 105.

Type species *Lepas diadema* Linnaeus, 1767: 1109; type locality unknown.

***Coronula diadema* (Linnaeus, 1767)**

*Pediculus cetti* Ellis, 1758: 851, fig. 7, 7a.  
*Lepas diadema* Linnaeus, 1767: 1109.  
*Lepas balaenaris* Müller, 1776: 250, No. 3024.  
*Balanus balaena* Da Costa, 1778: 251.  
*Balanus diadema*. — Bruguière, 1789: pl. 164 fig. 13.  
*Diadema vulgaris* Schumacher, 1817: 91.  
*Coronula diadema*. — Lamarck, 1818: 387. — Dong et al., 1982: 109, fig.  
*Diadema candidum* Ranzani, 1818: 88.  
*Polylepas (Diadema) kleinii* Gray, 1825: 105.  
*Coronula biscayensis* Van Beneden, 1870: 349.  
*Diadema japonica* Van Beneden, 1870: 354.  
*Diadema californica* Van Beneden, 1870: 355.  
*Diadema antiquum* Philippi, 1887: 226.  
*Coronula macsotayi* Weisbord, 1971: 91, pl. 20 figs. 1–4.

**Distribution.** Cosmopolitan (S China Sea, Taiwan, China); epizoic on humpback (*Megaptera novaeangliae* (Borowski, 1781)), fin (*Balaenoptera physalus* (Linnaeus, 1758)), blue (*Balaenoptera musculus* (Linnaeus, 1758)) and sperm (*Physeter macrocephalus* Linnaeus, 1758) whales.

(27, 32, 37, 40, 65, 66, 67, 68, 69, 71, 75, 88, 95, 96, 107, 127, 128, 129, 137, 141, 142, 143, 144, 149, 173, 179, 182, 194, 195, 198, 205, 215, 228, 234, 257, 258, 259, 277, 278, 299, 322, 344, 345, 346, 347, 355, 356, 357, 372, 373, 375, 381, 468, 487, 488, 505, 543, 546b, 551b, 552, 554, 563, 598); (403, as *Balanus balena* Da Costa, *Coronula biscayensis* Van Beneden; *Diadema californica* Van Beneden, *D. candidum* Ranzani, *D. japonica* Van Beneden, *D. vulgaris* Schumacher, *Lepas balaenaris* Müller, *Polylepas kleinii* Gray); (409, as *Diadema antiquum* Philippi, 1887: 226); (Liu & Ren, 2007; Chan, Prabowo & Lee, 2009b).

**SUPERFAMILY TETRACLITOIDEA Gruvel, 1905**

Tetraclitinae Gruvel, 1905a: 8.  
 Tetraclitoidea. — Newman, 1993: 408 (Tetraclitoidea Gruvel, stat. nov. for Tetraclitinae Gruvel, 1905a).

**FAMILY BATHYLASMATIDAE Newman & Ross, 1971**

Bathylasmatidae Newman & Ross, 1971: 138 (part.). — Newman & Ross, 1976: 37, 45 (part.).

Bathylasmatinae. — Newman & Ross, 1976: 37, 45. — Buckeridge, 1983: 68. — Newman, 1996: 502. — Buckeridge, 1999: 522. — Jones, 2000: 231, tables 1–2.

#### SUBFAMILY HEXELASMATINAE Newman & Ross, 1976

Hexelasmatinae Newman & Ross, 1976: 37, 46.

##### Genus *Hexelasma* Hoek, 1913

*Hexelasma* Hoek, 1913: 244 (part.). — Utinomi, 1965: 13. — Jones, 2000: 240, figs. 51, 64, tables 28–30.

*Aptolasma* Newman & Ross, 1971: 158.

Type species *Hexelasma velutinum* Hoek, 1913: 246 (part.); type locality Indonesia, 6°08'S, 121°19'E (SIBOGA Station 105).

##### *Hexelasma arafurae* Hoek, 1913

*Hexelasma arafurae* Hoek, 1913: 251, pl. 25 figs. 12–16. — Jones, 2000: 246, fig. 51, tables 28–31.

**Distribution.** Indonesia, Arafura Sea.

(200); (Jones, 2000).

##### *Hexelasma velutinum* Hoek, 1913

*Hexelasma velutinum* Hoek, 1913: 246, pl. XXVI figs. 1–16 (part., only material from SIBOGA Station 105, non Stations 59 & 251, = *Aptolasma leptoderma* Newman & Ross, 1971: 165, figs. 79, 80, pl. XXXIII, A, B, XL). — Withers, 1913: 847. — Chan et al., 2010: 41, figs. 2I, 29A–H, 30A–D.

**Distribution.** Kei Is, Indonesia; Malay Arch.; S China Sea; Philippines; Taiwan; Japan (S); off New Zealand; WSW Pacific; attached to gastropod shells, rocks; 204–390 m.

(112a, 169b, 344, 345, 451, 533, 558); (200, part.); (44, ? part.). (Jones, 2000; Liu & Ren, 2007; Chan, Prabowo & Lee, 2009b).

#### FAMILY TETRACLITIDAE Gruvel, 1903

Balanidae. — Gray, 1825: 104 (part.).

Tétraclitinés Gruvel, 1903: 160. — Nilsson-Cantell, 1921: 357.

Tétraclitinés (Tetraclitinae) Gruvel, 1905a: 284.

Tetraclitinae. — Nilsson-Cantell, 1921: 357.

Tetraclitidae. — Ross, 1968: 6.

#### SUBFAMILY TETRACLITELLINAE Newman & Ross, 1976

Tetraclitellinae Newman & Ross, 1976: 38, 46.

##### Genus *Tetraclitella* Hiro, 1939

*Tetraclitella* Hiro, 1939f: 273. — Ross & Perreault, 1999: 6.

Type species *Lepas purpurascens* Wood, 1815 type locality “South Seas”.

##### Subgenus *Eotetraclitella* Ross & Perreault, 1999

*Tetraclitella* (*Eotetraclitella*) Ross & Perreault, 1999: 6.

Type species *Tetraclitella darwini* Pilsbry, 1928: 314, fig. 4, pl. 25 figs. 1–3 a.; type locality Hirado, Gotto rettō, Japan (32°22'N, 129°31'E),

##### *Tetraclitella* (*Eotetraclitella*) *costata* (Darwin, 1854) ■

*Tetraclitella costata* Darwin, 1854: 339, pl. 11 figs. 2a–c.

*Tetraclitella costata*. — Ross, 1971: 217. — Dong et al., 1982: 112, fig.

*Tetraclitella* (*Eotetraclitella*) *costata*. — Ross & Perreault, 1999: 6.

**Distribution.** Indonesia; Singapore; Vietnam; China; Philippines; littoral.

(88, 95, 96, 115, 128, 205, 345, 354, 446, 457); (Ross & Perreault, 1999; Liu & Ren, 2007; Poltarukha & Dautova, 2007; Poltarukha & Zvyagintsev, 2008). (Singapore, S. Teo, pers. comm.)

##### Subgenus *Tetraclitella* Ross & Perreault, 1999

*Tetraclitella* (*Tetraclitella*) s. str. Ross & Perreault, 1999: 6.

Type species *Lepas purpurascens* Wood, 1815 type locality “South Seas”.

##### *Tetraclitella* (*Tetraclitella*) *divisa* (Nilsson-Cantell, 1921) ■

*Tetraclitella divisa* Nilsson-Cantell, 1921: 362, fig. 83, pl. 3 fig. 11.

*Tetraclitella divisa*. — Ross, 1968: 13. — Dong et al., 1982: 111, fig.

*Tetraclitella* (*Tetraclitella*) *divisa*. — Ross & Perreault, 1999: 6.

**Distribution.** Circum-tropical; Caribbean; W Africa; Java; Malaysia; Sumatra; N Australia; Singapore; S China Sea; China; Taiwan; Japan; Pacific Ocean to Hawaii and Pitcairn; littoral; shaded intertidal rocks.

(31, 95, 96, 111, 205, 234, 345, 406, 435, 446, 448, 452, 457, 458, 512); (193, 194, 347, 456, 501, as *Tetraclitella divisa*); (97, as *T. purpurascens*); (Ross & Perreault, 1999; Liu & Ren, 2007; Chan, Prabowo & Lee, 2009b). (Singapore, S. Teo, pers. comm.)

##### *Tetraclitella* (*Tetraclitella*) *karendei* Ross, 1971

*Tetraclitella karendei* Ross, 1971: 217, figs. 23, 4A–J. — Chan et al., 2009: 214, fig. 184a–d, fig. 185a–h, fig. 186a–b.

*Tetraclitella* (*Tetraclitella*) *karendei*. — Ross & Perreault, 1999: 6.

**Distribution.** India; Philippines; Taiwan; littoral, on shaded rocks.

(239, 345, 457, 458); (Ross & Perreault, 1999; Liu & Ren, 2007; Chan, Prabowo & Lee, 2010).

***Tetraclitella (Tetraclitella) multicostata* (Nilsson-Cantell, 1930)**

*Tetraclitella purpurascens* var. *multicostata* Nilsson-Cantell, 1930a: 2.  
*Tetraclitella multicostata*. — Utinomi, 1962: 231, figs. 9, 10.  
*Tetraclitella chinensis*. — Zevina & Tarasov, 1963: 97, fig. 14.  
*Tetraclitella multicostata*. — Ross, 1971: 217.  
*Tetraclitella (Tetraclitella) multicostata*. — Ross & Perreault, 1999: 6.

**Distribution.** Australia (N); Indonesia; Malaysia; China; Taiwan; New Guinea; Fiji; Japan; W Pacific; lower littoral, intertidal shaded rocks.

(111, 205, 234, 345, 435, 446, 457); (353, as *Tetraclitella purpurascens* var. *multicostata*); (354, as *Tetraclitella purpurascens multicostata* nov. var.); (528, as *Tetraclitella multicostata*); (194, as *Tetraclitella chinensis*); (Ross & Perreault, 1999; Liu & Ren, 2007; Chan, Prabowo & Lee, 2009b).

**SUBFAMILY TETRACLITINAE Gruvel, 1903**

Tetraclitinae Gruvel, 1903: 95 (part.).

**Genus *Tesseropora* Pilsbry, 1916**

*Tesseropora* Pilsbry, 1916: 259.

Type species *Conia rosea* Krauss, 1848: 136, pl. 6 fig. 28; type locality Algoa Bay, South Africa.

***Tesseropora alba* Ren & Liu, 1979**

*Tesseropora alba* Ren & Liu, 1979: 344, fig. 4, pl. 4 figs. 10–18.  
— Zevina et al., 1992: 12, fig. 34. — Jones et al., 2000: 263. — Liu & Ren, 2007: 344, fig. 155 — Poltarukha & Zvyagintsov, 2008: 110, fig. 40.

**Distribution.** Vietnam; Yongxingdao, Xisha Is, Guangdong Province, China: littoral, fouling species.

(205, 435) (Zevina et al., 1992; Jones et al., 2000; Liu, & X. Ren, 2007; Poltarukha & Zvyagintsov, 2008)

**Genus *Tetraclitella* Schumacher, 1817**

*Tetraclitella* Schumacher, 1817: 91.

Type species *Balanus squamulosa* Schumacher, 1817: 91 (= *Balanus squamosa* Bruguière, 1789: 170, pl. 165 figs. 9, 10; Gmelin, 1789). The type locality of *B. squamulosa* is unknown, but Bruguière (1789: 171) stated that *B. squamosa* was found at Tranquebar, India (i.e. not at a location in East Asia). However, Pilsbry (1916: 250) suggested the Indian location was erroneous and that the type specimens of Bruguière (1789) and Gmelin (1789) were more likely collected from China or the Philippines, based on their

morphological description. Chan et al. (2007a) followed the suggestion of Pilsbry (1916) and stated the specimens collected in Hong Kong and S. China represent *Tetraclitella squamosa*.

***Tetraclitella kuroshioensis* Chan, Tsang and Chu, 2007**

*Tetraclitella pacifica* Chan et al., 2007b: 88, figs. 4–6.  
*Tetraclitella kuroshioensis* Chan et al., 2007a: 56.

**Distribution.** Andaman Sea; Vietnam; Taiwan; Japan.

**Remarks.** This species was identified from the hitherto *T. squamosa* species complex, and has the widest geographical distribution in the Indo-Pacific region. Tsang et al. (2011) have showed *T. kuroshioensis* to be common in the South China Sea. However, it has a very patchy distribution in the Indo-Malay peninsula, currently not recorded from Singapore and the east and west coast of Malaysia, but present in high abundance in Phuket, Thailand.

(Chan et al., 2007a, b; Tsang et al., 2011)

***Tetraclitella singaporensis* Chan, Tsang & Chu, 2007\***

*Tetraclitella singaporensis* Chan et al., 2007b: 52, figs. 1–3.

**Distribution.** Malay peninsula; Singapore.

(Chan, Tsang & Chu, 2007b; Tsang et al., 2011).

***Tetraclitella squamosa* (Bruguière, 1789) \*■**

*Balanus squamosus* Bruguière, 1789: 170, pl. 165 figs. 9, 10.  
*Lepas fungites* Spengler, 1790: 189.  
*Lepas porosa* Gmelin, 1791: 3212.— Wood, 1815: pl. 9 fig. 4.  
*Tetraclitella squamulosa* Schumacher, 1817: 91.  
*Asemus porosus*.— Ranzani, 1820: pl. 3 figs. 32–35.  
*Conia porosa*.— Sowerby, 1823: pl. 1.  
*Tetraclitella porosa* Var. (3) *viridis* Darwin, 1854a: 329.  
*Tetraclitella porosa viridis*. — Nilsson-Cantell, 1921: 364.  
*Tetraclitella squamosa*. — Stebbing, 1910: 570. — Ren & Liu, 1979: 339, pl. 1 figs. 1–11.— Yamaguchi, 1987: 344. — Zevina et al., 1992: 45, fig. 30. — Chan, 2001: 625, fig. 8.—Chan et al., 2007a: 82, fig. 4.  
*Tetraclitella squamosa squamosa*.— Pilsbry, 1916: 251. — Dong et al., 1982: 110, fig.  
*Tetraclitella squamosa* forma *viridis*.— Broch, 1922: 337.  
*Tetraclitella squamosa viridis*.— Hiro, 1936b: 635.  
*Tetraclitella porosa perfecta* Nilsson-Cantell, 1931a: 133, fig. 8a–e, pl. II.

**Distribution.** China, Hainan Island; Singapore; Malaysia.

**Remarks.** Past literature records of *Tetraclitella squamosa* encompassed a wide geographical distribution that covered the whole Indo-Pacific region (see references below). However, studies by Chan et al. (2007a, b) and Tsang et al. (2011) demonstrate that *T. squamosa* in the Indo-Pacific is a species complex that includes a combination of different species. Based on morphological and molecular analysis, cryptic species were identified as different species with more

restricted ranges, including *T. squamosa*, *T. kuroshioensis* and *T. singaporensis*. Following the suggestion of Pilsbry (1916), Chan et al. (2007a) considered the species distributed in southern China as *T. squamosa* and the oceanic species, which is distributed in Taiwan and Japan as *T. kuroshioensis*. Furthermore, Chan et al. (2007c) identified *T. singaporensis* from Singapore and the Malay Peninsula. According to wide geographical scale sampling and molecular analysis conducted by Tsang et al. (2011), *T. squamosa* is distributed along the southern coast of mainland China, north Hainan Island and also in Malaysia (Fig. 1, Tsang et al., 2011) and **Singapore** (B.K.K. Chan, unpublished data; S. Teo, pers. comm.). Species found outside of these ranges will be other species.

(27, 34, 35, 38, 39, 41, 44, 46, 48, 62, 74, 92, 95, 96, 101, 113b, 120, 121, 128, 133, 134, 151, 191, 193, 194, 200, 203, 211, 234, 259, 279, 280, 282, 284, 301, 321, 330, 345, 347, 354, 357, 377, 380, 403, 414, 417, 426, 435, 442, 444, 490, 501, 510, 512, 516, 522, 534, 536, 553, 575, 576); (88, as *Tetraclita porosa* var. *viridis*); (379, 546b, as ? *T. stalactifera*); (111, 176, 181, 182, 192, 514, as *T. squamosa viridis*); (205, as *T. viridis*); (364, 365, 372, as *Tetraclita porosa viridis*); (484, ? *Lepas mitra*); (487, as *porosa* Gmelin, 1790 = *squamosa* Bruguière); (Wu, 1975; Zevina et al., 1992; Leung & Jones, 2000; Chan, 2001; Chan, 2003; Chan, 2007; Chan et al. 2007a, b; Liu & Ren, 2007; Chan, Akihisa & Lee, 2008c; Chan, Prabowo & Lee, 2009b; Tsang et al., 2015a) (**Singapore**, S. Teo, pers. comm.; Prof. B.K.K. Chan, unpublished data, pers. comm.)

#### SUBFAMILY NEWMANELLINAE Ross & Perreault, 1999

Newmanellinae Ross & Perreault, 1999: 2.

#### Genus *Yamaguchiella* Ross & Perreault, 1999

*Yamaguchiella* Ross & Perreault, 1999: 5.

Type species *Lepas coerulescens* Spengler, 1790: 191; type locality “East Indies”, designated by Ross & Perreault (1999: 5) as Philippine Archipelago, through acceptance of the first listed locality of Darwin (1854: 342) as the type locality where it commonly occurs (see Rosell, 1972: 214).

#### Subgenus *Neonrosella* Jones, 2010

*Yamaguchiella* (*Rosella*). — Ross & Perreault, 1999: 5.

*Yamaguchiella* (*Neonrosella*) Jones, 2010: 214.

Type species *Tetraclita vitiata* Darwin, 1854: 340, pl. 11 fig. 3a–e; type locality Philippine Archipelago.

**Remarks.** Jones (2010: 214) proposed the name *Neonrosella* for the subgenus *Rosella* Ross & Perreault, 1999, as *Rosella* is preoccupied by a neotropical weevil genus (Jones, 1979; Clark, 1980). A recent molecular analysis by Tsang et al. (2015a) has indicated that the subgenera *Yamaguchiella* and *Neonrosella* are located in two distinct and distantly-related

clades within the tetraclitid clade, suggesting that they are not closely related. Based on these findings, Chan & Cheang (2016) have proposed that the subgenus *Neonrosella* should be elevated to generic level, and Prof. B.C.C. Chan (pers. comm.) has indicated that this elevation is occurring in an upcoming publication.

#### *Yamaguchiella* (*Neonrosella*) *vitiata* (Darwin, 1854)

*Tetraclita vitiata* Darwin, 1854: 340, pl. 11 fig. 3a–e.

*Tetraclita* (*Tetraclita*) *vitiata*. — Rosell, 1972: 214.

*Newmanella vitiata* — Yamaguchi, in Ikeya & Yamaguchi, 1993: 93. — Jones et al., 1990: 14.

*Yamaguchiella* (*Rosella*) *vitiata* — Ross & Perreault, 1999: 5.

*Yamaguchiella* (*Neonrosella*) *vitiata* — Jones, 2010: 214.

**Distribution.** Indo-west Pacific: Indian Ocean; Nicobar Is, Australia (N and GBR); Indonesia; Malay Arch.; Sulu Arch.; Philippines; Pacific Ocean; low littoral.

(88, 489, as *Tetraclita vitiata*); (442 as *Tetraclita vitiata*); (Ikeya & Yamaguchi, 1993; Ross & Perreault, 1999; Jones, 2010; Tsang et al., 2015a).

#### Subgenus *Yamaguchiella* Ross & Perreault, 1999

*Yamaguchiella* (*Yamaguchiella*) Ross & Perreault, 1999: 5.

Type species *Lepas coerulescens* Spengler, 1790: 191; type locality Philippine Archipelago.

#### *Yamaguchiella* (*Yamaguchiella*) *coerulescens* (Spengler, 1790)

*Lepas coerulescens* Spengler, 1790: 191.

*Tetraclita coerulescens*. — Darwin, 1854: 342 pl. 11 fig. 4a–d. —

Dong et al., 1982: 111, fig. — Zevina et al., 1992: 48, fig. 31.

*Yamaguchiella* (*Yamaguchiella*) *coerulescens*. — Ross & Perreault, 1999: 5.

**Distribution.** Indo-west Pacific: Indian Ocean; Bay of Bengal; Mergui Arch., Australia (N); Kei Is; Banda Is; Indonesia; Malay Arch.; Sulu Arch.; Vietnam; China; Philippines; Goram I.; Palao Is; Pacific Ocean; littoral, low on exposed rocky shores.

(44, 88, 95, 96, 101, 128, 175, 176, 181, 191, 195, 200, 205, 234, 345, 372, 403, 435, 442, 484, 490; as *Tetraclita coerulescens*); (Zevina et al., 1992; Liu & Ren, 2007; Poltarukha & Zvyagintsev, 2008; Chan, Prabowo & Lee, 2009b).

#### SUPERFAMILY BALANOIDEA Leach, 1817

Balanoidea Leach, 1817: 68 (nom. trans. Newman & Ross, 1976).

#### FAMILY ARCHAEOBALANIDAE Newman & Ross, 1976

Archaeobalanidae Newman & Ross, 1976: 38, 49.

**SUBFAMILY ARCHAEOBALANINAE Newman & Ross, 1976**

Archaeobalaninae Newman & Ross, 1976: 38, 49.

**Genus *Armatobalanus* Hoek, 1913**

*Armatobalanus* Hoek, 1913: 159, 162, 207.

*Armatobalanus*. — Pilsbry, 1916: 226.

*Armatobalanus* (*Armatobalanus*). — Newman & Ross, 1976: 23, 50.

Type species *Balanus quadrivittatus* Darwin, 1854: 284, pl. 8 fig. 1; type locality East Indian Archipelago.

***Armatobalanus* (*Armatobalanus*) *allium* (Darwin, 1854)**

*Balanus allium* Darwin, 1854: 281, pl. 7 fig. 7a–d.— Dong et al., 1982: 100, fig.

*Balanus arcuatus* Hoek, 1913: 210, pl. 21 figs. 4–14.

*Acasta madreporicola* Broch, 1922: 333, figs. 60–70.

*Balanus* (*Armatobalanus*) *allium*. — Zullo, 1963b: 588.

*Balanus* (*Armatobalanus*) *allium truncatus* Zullo, 1963b: 588.

*Balanus* (*Armatobalanus*) *arcuatus*. — Zullo, 1963b: 588.

*Armatobalanus* (*Armatobalanus*) *allium*. — Newman & Ross, 1976: 49.

**Distribution.** Indo-west Pacific: Red Sea; Bay of Bengal; Ceylon; Andamans; W coast of Sumatra; Banda Sea; Indonesia; N Australia; Great Barrier Reef, Australia; Malay Arch.; Vietnam; Hong Kong; China; Sulu Arch.; SW Japan; attached to corals (e.g., *Porites* sp.); 9–55 m.

**Remarks.** In a recent molecular analysis of the phylogeny of coral-associated barnacles (Tsang et al., 2014), *Armatobalanus allium* is located in the Pyrgomatidae clade, suggesting it is not closely related to the Archaeobalanidae. Thus, the taxonomic position of *Armatobalanus allium* should be revised in future studies.

(4, 88, 95, 96, 113b, 128, 205, 234, 265, 345, 403, 434, 528, 539, 600); (20, 44, 347, 372, 512, as *Balanus arcuatus*); (39, as *Acasta madreporicola* n. sp.); (175, 512, as *Acasta madreporicola*); (200, as *Balanus arcuatus* n. sp.); (599, as *Balanus* (*Armatobalanus*) *allium*, *Balanus* (*Armatobalanus*) *allium truncatus* and *Balanus* (*Armatobalanus*) *arcuatus*); (Leung & Jones, 2000; Liu & Ren, 2007; Poltarukha & Dautova, 2007; Poltarukha & Zvyagintsev, 2008; Tsang et al., 2014).

***Armatobalanus* (*Armatobalanus*) *cepa* (Darwin, 1854)\***

*Balanus cepa* Darwin, 1854: 283, pl. 7 fig. 8a–c.— Dong et al., 1982: 101, fig.

*Balanus terebratus*. — Borradaile, 1903: 442.

*Balanus allium*. — Annandale, 1906a: 148.

*Balanus fujiyama* Annandale, 1924: 62, pl. 12 figs. 1–3.

*Balanus fujiyamaformis* Kolosváry, 1947c: 358, fig. 1.

*Armatobalanus* (*Armatobalanus*) *cepa*. — Newman & Ross, 1976: 49.

*Armatobalanus cepa*. — Jones et al., 1990: 14.

**Distribution.** Indo-west Pacific: Indian Ocean; Gulf of Manaar; Maldives; Ceylon; Mergui Arch.; N Australia; Aroe Is; Indonesia; **Singapore**; Malay Arch.; China; Philippines; SW Japan; sublittoral to 50 m.

(44, 88, 95, 96, 128, 205, 234, 345, 361, 403, 434, 512, 528, 539); (4, 36, as ?*Balanus terebratus*); (4, as ?*Balanus allium*); (20, 176, as ?*Balanus fujiyama*); (259, 599, as *Balanus fujiyama*); (262, as *Balanus fujiyamaformis* n. sp.); (372, as *Balanus cepa*); (599, as *Balanus fujiyamaformis*); (Liu & Ren, 2007).

***Armatobalanus* (*Armatobalanus*) *quadrivittatus* (Darwin, 1854)\***

*Balanus quadrivittatus* Darwin, 1854: 284, pl. 8 fig. 1.

*Balanus* (*Armatobalanus*) *quadrivittatus*. — Zullo, 1963b: 589.

*Armatobalanus* (*Armatobalanus*) *quadrivittatus*. — Newman & Ross, 1976: 49.

*Armatobalanus quadrivittatus*. — Jones & Morton, 2008: 821. — Zevina et al., 1992: 71, fig. 48.

**Distribution.** Indo-west Pacific: Indian Ocean; Mergui Arch.; Maldives; Indonesia; western & northern Australia; Java Sea; Timor; Mergui Arch.; Banda Sea; **Singapore**; Malay Arch.; Vietnam; Cauda Nhatrang; Hong Kong; Philippines; S and SW Japan; 31–51 m.

(36, 46, 88, 91, 92, 127, 128, 195, 200, 235, 261, 266, 345, 347, 403, 528, 539); (365, 372, as *Balanus quadrivittatus*); (599, as *Balanus* (*Armatobalanus*) *quadrivittatus*); (. Zevina et al., 1992; Jones & Morton, 2008; Poltarukha & Dautova, 2007; Poltarukha & Zvyagintsev, 2008).

**Genus *Conopea* Say, 1822**

*Conopea* Say, 1822: 323.

*Conoplea* Gray, 1825: 98, 103.

*Balaninus* Costa, 1839: 181.

*Balanus* Section B Darwin, 1854: 216.

*Patella-Balanus* Hoek, 1913: 160, 162, 221.

Type species *Conopea elongata* Say, 1822: 323; type locality Eastern Florida, USA.

***Conopea calceola* (Ellis, 1758)**

*Balanus calceolus keratophyto involutus* (?) Ellis, 1758: 853, pl. 34 fig. 19.

*Conoplea ovata* (?) Gray, 1825: 103.

*Balanus calceolus* Darwin, 1854: 218, pl. 3 fig. 3a–e. — Hiro, 1937c: 443, figs. 27A–E, 28 A–F. — Dong et al., 1982: 102, fig. A–C.

*Balanus* (*Conopea*) *calceolus*. — Broch, 1931: 85. — Ren & Liu, 1978: 177, fig. 30, pl. X 1–5.

*Balanus* (*Conopea*) cf *calceolus*. — Utinomi, 1969a: 91.

*Conopea calceola*. — Newman & Ross, 1976: 54.

**Distribution.** W coast of Africa, Mediterranean to S. Africa; Indo-west Pacific: Indian Ocean; Persian Gulf to N Australia; Malay Arch., Hong Kong; Philippines, China; Japan; attached



to gorgonians; 16–250 m. Miocene to Pleistocene, Italy; Coralline Crag, England.

(1, 2, 39, 41, 42, 80, 89, 95, 96, 99, 113b, 114, 127, 128, 130, 134, 200, 205, 234, 262, 279, 280, 284, 315, 345, 350, 403, 422, 434, 451, 487, 497, 499, 512, 514, 522, 528, 536, 539, 562); (44, 501, 525, 535, as *Balanus (Conopea) calceola*); (88, as *Balanus calceola*); (182, 372, as *Balanus calceolus*); (Leung & Jones, 2000; Liu & Ren, 2007).

***Conopea cymbiformis* (Darwin, 1854)**

*Balanus cymbiformis* Darwin, 1854: 221, pl. 3 figs. 5a, b. — Nilsson-Cantell, 1921: 331, fig. 70c, d. — Dong et al., 1982: 103, fig. *Balanus proripiens* Hoek, 1913: 228, pl. 23 figs. 17–21, pl. 24 figs. 1–3.

*Pyrgoma jedani* Hoek, 1913: 262, pl. 27 figs. 3–8.  
*Conopea cymbiformis*. — Newman & Ross, 1976: 55.

**Distribution.** Indo-west Pacific: Indian Ocean; Gulf of Aden, India, east to Fiji and NW to Indonesia, N Australia, Malay Arch.; China; Philippines; S Japan; Fiji Is; attached to coenosarc of gorgonians or antipatharians; littoral–453 m.

(44, 80, 92, 95, 96, 111, 128, 171, 205, 234, 279, 280, 285, 345, 434, 451, 512, 514, 539); (88, 372, 522, as *Balanus cymbiformis*); (39, as *Balanus proripiens*); (200, as *Balanus proripiens* n. sp.); (200, as *Pyrgoma jedani* n. sp.); (347, 492, 528, as *Balanus (Conopea) cymbiformis*); (Liu & Ren, 2007).

***Conopea dentifer* (Broch, 1922)**

*Balanus dentifer* Broch, 1922: 326, fig. 64a, b, fig. 65, fig. 66a–d.  
*Conopea dentifer*. — Newman & Ross, 1976: 55.

**Distribution.** Kei Is; Indonesia, Philippines and S Japan, W-SW Pacific, off Tonga I.; embedded in coenosarc of gorgonians or antipatharians; 26–266 m.

(277, 284, 345, 451); (39, 44, as *Balanus dentifer*).

***Conopea navicula* (Darwin, 1854)**

*Balanus navicula* Darwin, 1854: 221, pl. 3 fig. 6a–d. — Dong et al., 1982: 103, fig.

*Conopea navicula*. — Newman & Ross, 1976: 55.  
*Acasta spinitergum* Foster, 1982: 209, fig. 4d.

**Distribution.** Indo-west Pacific: Indian Ocean; Gulfs of Aden, Persia and Siam; Indonesia; Malay Arch.; China; S Japan; 45–220 m.

(88, 92, 95, 96, 128, 200, 205, 345, 434, 492, 528, 535, 539); (113b as *Acasta spinitergum*); (372, as *Balanus navicula*); (Liu & Ren, 2007).

**Genus *Membranobalanus* Hoek, 1913**

*Balanus* Section E Darwin, 1854: 267 (part.).  
*Membrano-Balanus* Hoek, 1913: 159.  
*Membranobalanus*. — Pilsbry, 1916: 51, 229.

Type species *Balanus declivis* Darwin, 1854: 275, pl. 7 fig. 4a–d; type locality Jamaica, West Indies, embedded in a sponge.

***Membranobalanus cuneiformis* (Hiro, 1936)**

*Balanus (Membranobalanus) cuneiformis* Hiro, 1936b: 627, figs. 5 A–H, 6 A–D, 7 A–D.

*Membranobalanus cuneiformis*. — Newman & Ross, 1976: 52.  
*Balanus cuneiformis*. — Dong et al., 1982: 102, fig.

**Distribution.** N Australia; Arafura Sea; S China sea; E China Sea; Japan; 0–15 m.

(192, 234, 345); (95, 96, 176, 205, as *Conopea cuneiformis*); (Liu & Ren, 2007).

***Membranobalanus longirostrum* (Hoek, 1913)\***

*Balanus (Membranobalanus) longirostrum* Hoek, 1913: 205, pl. 20 figs. 8–16.

*Balanus longirostrum* var. *krusadaiensis* Daniel, 1955b: 26, pl. 7 figs. 3–10.

*Balanus (Membranobalanus) basicupula* Suhaimi, 1966: 65, figs. 1, 2.

*Balanus (Membranobalanus) roonwali* Prem-Kumar & Daniel, 1968: 147, figs. 1–15.

*Membranobalanus longirostrum*. — Newman & Ross, 1976: 53.  
— Zevina et al., 1992: 50, fig. 33.

*Balanus longirostrum*. — Dong et al., 1982: 101, fig.

**Distribution.** Indian Ocean; East coast of India to Singapore; Malay Arch.; Fu Kuoh Is, Cambodia; Gulf of Siam; Vietnakh; Condor I.; Lien Chien, Tourane; Bay of Along, near Hongay, Tonkin; China; embedded in sponges, e.g., *Spirastrella purpurea* (Lamarck, 1815) (now *Sphaciospongia purpurea* (Lamarck, 1815)); 6–36 m.

(44, 92, 96, 176, 200, 205, 345, 347, 413, 434, 534); (46, 95, 372, as *Balanus longirostrum*); (413, as *Balanus (Membranobalanus) roonwali* n. sp.); (502, as *Balanus (Membranobalanus) basicupula* n. sp.); (547, as ?*Balanus declivis*); (Liu & Ren, 2007; Poltarukha & Zvyagintsev, 2008).

**Genus *Solidobalanus* Hoek, 1913**

*Solido-Balanus* Hoek, 1913: 159, 192.

*Balanus (Solidobalanus)*. — Pilsbry, 1916: 220.

*Solidobalanus*. — Newman & Ross, 1976: 23, 50.

Type species *Balanus auricoma* Hoek, 1913: 198, pl. XVIII figs. 20–22, pl. XIX figs. 1–7; type locality Ternate, SIBOGA station 136.

**Subgenus *Solidobalanus* Hoek, 1913**

*Solido-Balanus* Hoek, 1913: 159, 192.

*Balanus ((Solidobalanus))*. — Pilsbry, 1916: 220.

*Solidobalanus*. — Newman & Ross, 1976: 23, 50.

Type species *Balanus auricoma* Hoek, 1913: 198, pl. XVIII figs. 20–22, pl. XIX figs. 1–7; type locality Ternate, SIBOGA station 136.

***Solidobalanus (Solidobalanus) auricoma (Hoek, 1913)***

*Balanus auricoma* Hoek, 1913: 198, pl. XVIII figs. 20–22, pl. XIX figs. 1–7.

*Balanus (Solidobalanus) auricoma*. — Rosell, 1981: 303.

*Solidobalanus (Solidobalanus) auricoma*. — Newman & Ross, 1976: 50.

*Solidobalanus auricoma*. — Foster, 1981: 364, fig. 2 G.

**Distribution.** W Atlantic Ocean; Mediterranean Sea; Indo-west Pacific: Indian Ocean; Persian Gulf; N Australia; Banda Sea; Indonesia; Malay Arch.; Moluccas; Philippines; S Japan; NW New Zealand; WSW Pacific Ocean; attached to gorgonians; 27–320 m.

(112a, 234, 345, 364, 535, 603); (39, 112b, 200, 449, as *Balanus (Solidobalanus) auricoma*); (44, 155, 372, as *Balanus auricoma*).

***Solidobalanus (Solidobalanus) ciliatus (Hoek, 1913)***

*Balanus ciliatus* Hoek, 1913: 199, pl. XIX figs. 8–16.— Dong et al., 1982: 99, fig.

*Balanus maldivensis*. — Annandale, 1906a: 148.

*Solidobalanus (Solidobalanus) ciliatus*. — Newman & Ross, 1976: 50.

*Solidobalanus ciliatus*. — Zevina et al., 1992: 77, fig. 52. — Liu & Ren, 2007: 373, fig. 166.

**Distribution.** Indo-west Pacific: Indian Ocean; Gulfs of Aden, Persia and Manaar; Indonesia; N Australia; Malay Arch.; Réam (Cambodia); Gulf of Siam; Vietnam, Ile Tre, Nhatrang; Codor Is; Hong Kong; E and S China Sea; Philippines; S Japan; attached to sea urchin spines; 13–220 m.

(44, 92, 95, 96, 113b, 155, 205, 234, 345, 348, 402, 433, 434, 492, 535, 603); (46, 364, 365, 372, as *Balanus ciliatus*); (4, as *Balanus maldivensis*); (Zevina et al., 1992; Leung & Jones, 2000; Liu & Ren, 2007; Poltarukha & Zvyagintsev, 2008).

***Solidobalanus (Solidobalanus) echinoplacis (Stubbings, 1936)***

*Balanus echinoplacis* Stubbings, 1936: 45, fig. 20A–K.

*Solidobalanus (Solidobalanus) echinoplacis*. — Newman & Ross, 1976: 51.

*Balanus (Solidobalanus) echinoplacis*. — Rosell, 1981: 304.

**Distribution.** Indo-west Pacific: E coast of Africa (Zanzibar) to Philippines; attached to spines of echinoids; 150–50 m.

(155, 345, 451, 603); (492, as *Balanus echinoplacis*); (449, as *Balanus (Solidobalanus) echinoplacis*).

***Solidobalanus (Solidobalanus) maldivensis (Borradaile, 1903)***

*Balanus maldivensis* Borradaile, 1903: 442, fig. 118.

*Balanus (Solidobalanus) maldivensis*. — Rosell, 1981: 303.

*Solidobalanus (Solidobalanus) maldivensis*. — Newman & Ross, 1976: 51.

**Distribution.** Indo-west Pacific: Indian Ocean (Maldives), Indonesia, Philippines; attached to echinoid spines; 54–390 m.

(155, 345, 451, 603); (4, 36, 200, as *Balanus maldivensis*); (449, 450, as *Balanus (Solidobalanus) maldivensis*).

***Solidobalanus (Solidobalanus) socialis (Hoek, 1883)***

*Balanus socialis* Hoek, 1883: 150, pl. XIII figs. 23–28.— Dong et al., 1982: 99, fig. A–C.

*Balanus aeneas* Lanchester, 1902: 370, pl. XXXIV fig. 4–4b.

*Solidobalanus (Solidobalanus) socialis*. — Newman & Ross, 1976: 51.

*Solidobalanus socialis*. — Zevina et al., 1992: 76, fig. 51.

**Distribution.** Indo-west Pacific: Gulfs of Persia and Manaar; Bay of Bengal; N Australia; Indonesia; Malay Arch; Vietnam; China; SE coast of Japan; 0–91 m; fouling species.

(95, 96, 155, 166, 200, 205, 345, 434, 496, 512, 528, 534, 535, 537, 539, 603); (4, 128, 200, as *Balanus aeneas*); (182, 365, 367, 372, as *Balanus socialis*); (291, as *Balanus aeneas* n. sp.); (Zevina et al.; Liu & Ren, 2007; Poltarukha & Zvyagintsev, 2008).

**Genus *Striatobalanus* Hoek, 1913**

*Balanus* Section F (part.) Darwin, 1854: 277.

*Chirona* Gray, 1825: 37.

*Balanus (Striato-Balanus)* Hoek, 1913: 159, 179.

*Chirona (Striatobalanus)*. — Newman & Ross, 1976: 23, 50.

*Striatobalanus*. — Jones, 2004: 150.

Type species *Balanus amaryllis* var. (a), var. (b) Darwin, 1854: 279, pl. 7 figs. 6a–c; type locality unknown.

***Striatobalanus amaryllis (Darwin, 1854)\* ■***

*Balanus amaryllis* var. (a), var. (b) Darwin, 1854: 279, pl. 7 fig. 6a–c.

*Balanus amaryllis dissimilis* Lanchester, 1902: 369, pl. XXXIV fig. 3–3C, with var. *clarovittata* Lanchester, 1902: 370.

*Balanus amaryllis* var. *a* (= *Balanus roseus* Lamarck, 1818) Gruvel, 1905a: 250, with var. *b (niveus)*, Gruvel, 1905a: 250 (= *Balanus amaryllis* var. *b* Darwin, 1854: 279)).

*Balanus (Chirona) amaryllis*. — Nilsson-Cantell, 1921: 329, pl. 3, fig. 9. — Rosell, 1981: 302.

*Balanus amaryllis* forma *euamaryllis* Broch, 1922: 321.

*Balanus amaryllis* forma *laevis* Broch, 1931: 67, fig. 24.

*Balanus* sp. Dong & Mao, 1956: 290, fig. 8.

*Chirona (Striatobalanus) amaryllis*. — Newman & Ross, 1976: 50.

*Chirona amaryllis*. — Foster, 1981: 350.

*Balanus amaryllis*. — Dong et al., 1982: 95, fig.

*Balanus amaryllis euamaryllis*. — Dong et al., 1982: 96, fig. A–C.

*Chirona amarillis*. — Zevina et al., 1992: 72, fig. 49.

*Striatobalanus amaryllis*. — Jones, 2004: 150.

**Distribution.** Indo-west Pacific: S and E Africa, Indian Ocean; Australia (N); Arafura Sea; **Singapore**; Malay Arch.; Cambodia; Gulf of Thailand; Mouth of Bassac; Vietnam (Bay of Nhatrang; Lien Chien, Tourane; Codor Is); Hong Kong; S China Sea; China; Philippines; Taiwan; Japan (S); attached to rocks, gastropod shells (e.g., *Gemmula* sp., *Phalium* sp., turrids), rusting iron, fouling species; sublittoral, 5–500 m.

(4, 39, 80, 92, 94, 96, 101, 113b, 127, 176, 192, 194, 195, 199, 200, 203, 207, 212, 234, 244, 279, 280, 284, 345, 347, 403, 433, 450, 451, 492, 494, 528, 531, 534, 535, 539, 575, 576); (88, var. a, var. b); (39, as *forma euamaryllis* nov.); (44, as *forma laevis* nov.); (46, as *Balanus amaryllis amaryllis* and *Balanus amaryllis niveus*); (95, as *Balanus amaryllis* and *Balanus amaryllis euamaryllis*); (128, as *var. niveus* nov. = var. b Darwin, 1854); (205, 364, 365, 367, as *Balanus amaryllis*); (291, as *Balanus amaryllis dissimilis* n. subsp.; as *Balanus amaryllis dissimilis* var. *clarovittata*); (349, as *Balanus amaryllis* forma *euamaryllis*); (349, 354, as *Balanus amaryllis euamaryllis*); (as *Balanus amaryllis* f. *euamaryllis*, *Balanus amaryllis* f. *nivea*); (449, as *Balanus (Chirona) amaryllis*); (Zevina et al., 1992, as *Chirona amaryllis*); (Wu, 1975; Leung & Jones, 2000; Liu & Ren, 2007; Poltarukha & Zvyagintsev, 2008; Chan, Prabowo & Lee, 2009b; Tsang et al., 2015b). (**Singapore**, S. Teo, pers. comm.)

#### *Striatobalanus kruegeri* (Pilsbry, 1916)

*Balanus (Chirona) kruegeri* Pilsbry, 1916: 214, fig. 69a–d, pl. 51 fig. 2–2b, pl. 52 fig. 1–1f.  
*Balanus amphitrite kruegeri*. — Hiro, 1939f: 263.  
*Chirona (Striatobalanus) kruegeri*. — Newman & Ross, 1976: 50.  
*Striatobalanus kruegeri*. — Liu & Ren, 2007: 369, fig. 164.  
*Balanus kruegeri*. — Dong et al., 1982: 97, fig.

**Distribution.** Malay Arch., Kei Is; Moluccas; S China Sea; China; Taiwan; Japan; attached to sea urchin spines; 100–250 m.

(44, 95, 96, 205, 345, 403, 513, 522); (169b, 182, 190, as *Balanus kruegeri*); (193, 194, as *Balanus amphitrite kruegeri*); (Chan, Prabowo & Lee, 2009b; Liu & Ren, 2007, as *Balanus kruegeri*).

#### *Striatobalanus tenuis* (Hoek, 1883)\*

*Balanus (Striato-Balanus) tenuis* Hoek, 1883: 154, pl. 13 figs. 29–33.  
*Balanus (Striato-Balanus) albus* Hoek, 1913: 185, pl. XVI figs. 12, 13, pl. XVII figs. 1–6.  
*Chirona (Striatobalanus) tenuis*. — Newman & Ross, 1976: 50.  
*Balanus (Chirona) tenuis*. — Ren & Liu, 1978: 161, fig. 22, pl. 7 figs. 6–10.  
*Balanus tenuis*. — Dong et al., 1982: 97, fig. A–C.  
*Chirona tenuis*. — Zevina et al., 1992: 74, fig. 50.  
*Striatobalanus tenuis*. — Jones, 2004: 152. — Liu & Ren, 2007: 363, fig. 161 (1–9). — Chan, 2009: 74, fig. 2H, 23A–G.

**Distribution.** Indo-west Pacific: S Africa; Persian Gulf; Indian Ocean; Australia (N); Arafura Sea; Indonesia; **Singapore**; Malay Arch.; Vietnam; Hong Kong; S China Sea; E China Sea; Philippines; Taiwan; Japan (S); W Pacific; attached to crabs, gastropod (*Phalium* sp.; *Biplex perca*

Perry, 1811 (now *Apollon perca* (Perry, 1811)) and bivalve (*Crassostrea* sp.) shells solitary coral (*Flabellum* sp.), bark of coconut, gorgonians, antipatharians, stones; 7–551 m.

(27, 44, 80, 95, 96, 128, 195, 234, 345, 348, 349, 402, 403, 433, 434, 450, 493, 514, 528, 534, 535, 539); (182, 199, 205, 372, as *Balanus tenuis*); (199, as *Balanus albus* n. sp.); (200, as *B. albus* sp. nov.); (449, as *Balanus (Chirona) tenuis*); (492, as *Balanus (Chirona) albus*); (Zevina et al., 1992, as *Chirona tenuis*); (Leung & Jones, 2000; Jones, 2004; Liu & Ren, 2007; Poltarukha & Zvyagintsev, 2008; Chan, 2009; Chan, Prabowo & Lee, 2010).

### SUBFAMILY ACASTINAE Kolbasov, 1993

Balanidae. — Darwin, 1854: 33 (part.).  
 Balaniinae. — Nilsson-Cantell, 1921: 306 (part.).  
 Pyrgomatidae Gray, 1825: 102 (part.).  
 Acastinae Kolbasov, 1993: 412. — Newman, 1996: 503.

#### Genus *Acasta* Leach, 1817

*Acasta* Leach, 1817: 69.

Type species *Lepas spongites* Poli, 1795: 25, pl. VI figs. 3–6; type locality Sicily.

#### *Acasta conica* Hoek, 1913

*Acasta conica* Hoek, 1913: 235, pl. XXIV figs. 11–16.  
*Acasta spinosa* Hiro, 1939f: 267, figs. 11, 12. — Dong et al., 1982: 105, fig.

**Distribution.** Celebes; Sulu Arch.; Hong Kong; China; 40–60 m.

(39, 200, 252, 345, 428); (193, 205, as *Acasta spinosa*); (Leung & Jones, 2000; Liu & Ren, 2007).

#### *Acasta cyathus* Darwin, 1854\*

*Acasta cyathus* Darwin, 1854: 312, pl. 9 fig. 3a–c.

**Distribution.** Florida; Caribbean; Madeira; Morocco; Indo-west Pacific: Indian Ocean; E Africa; Red Sea; Gulf of Manaar; W Australia; **Singapore**; Kei Is; Sulu Arch.; Malay Arch.; Philippines; 15–180 m.

(4, 27, 39, 42, 44, 88, 117, 127, 128, 150, 200, 234, 252, 345, 347, 372, 403, 408, 492, 545, 553, 554, 593).

#### *Acasta fenestrata* Darwin, 1854

Darwin, 1854: 316, pl. 9 fig. 7a–c.

**Distribution.** Indo-west Pacific: Indian Ocean; Red Sea; Bay of Bengal; Australia; Malay Arch.; China; Philippines; Seto, Japan; embedded in sponges; to 51 m.

(88, 128, 192, 195, 200, 205, 252, 279, 280, 345, 372, 428, 442, 450, 514, 522, 554); (Liu & Ren, 2007).

***Acasta japonica* Pilsbry, 1911**

*Acasta spongites japonica* Pilsbry, 1911a: 80, pl. 16 figs. 1–9.  
*Acasta japonica*. — Pilsbry, 1916: 243, fig. 78.

**Distribution.** SE Asia; Malay Arch.; Cambodia; Réam (Cambodia); Vietnam; Ile Tre, Nhatrang; Gulf of Thailand; Taiwan; Southern Japan; 10–800 m.

(39, 44, 46, 92, 194, 252, 284, 345, 372, 400, 403, 528, 537, 601) (Liu & Ren, 2007; Poltarukha & Zvyagintsev, 2008).

***Acasta purpurata* Darwin, 1854**

*Acasta purpurata* Darwin, 1854: 318, pl. 9 fig. 8a–c.

**Distribution.** Indian Ocean; N Australia; Malay Arch.; Sumatra; Philippines; 0–5 m.

(88, 128, 182, 200, 252, 345, 372, 526).

***Acasta spongites* (Poli, 1795)**

*Lepas spongites* Poli, 1795: 25, pl. VI figs. 3–6.  
*Balanus spongites*. — Blainville, 1824: pl. 116 fig. 3.  
*Lepas spongiosa* Wood, 1815: 47.  
*Balanus Montagui*. — Brown, 1844: pl. 53 figs. 24–26.  
*Acasta spongites*. — Philippi, 1844: 211. — Darwin, 1854: 308, pl. IX fig. 1 a–d. — Zevina et al., 1992:70, fig. 47.

**Distribution.** N Atlantic, British Isles to Mediterranean; S Africa; Indo-west Pacific: W part of Indian Ocean; Australia; Vietnam; S China Sea; China; Japan (Hakodate, Sagami Bay); embedded in sponges; 10–800 m.

(27, 88, 128, 205, 234, 252, 259, 290, 345, 372, 403, 410, 428, 487, 514, 522, 535).  
(Zevina et al., 1992; Liu & Ren, 2007; Poltarukha & Zvyagintsev, 2008).

***Acasta sulcata* Lamarck, 1818**

*Acasta sulcata* Lamarck, 1818: 398. — Darwin, 1854: 310, pl. 9 fig. 2a–d. — Zevina et al., 1992: 61, fig. 40A, B.  
*Acasta serrata* Hiro, 1937b: 64, fig. 12.

**Distribution.** Indo-west Pacific: Indian Ocean; Persian Gulf; Red Sea; Maldives; Laccadives; Australia; Malay Arch.; Réam (Cambodia); Gulf of Thailand; Condor Is; Vietnam; Nhatrang; Lien Chien, Tourane; Hong Kong; South China Sea; Hong Kong; China; Philippines; Japan; embedded in sponges; 5–25 m.

(36, 46, 88, 92, 113b, 127, 128, 181, 203, 205, 234, 252, 262, 280, 290, 299, 345, 372, 393, 428, 494, 514, 522, 535); (Zevina et al., 1992; Leung & Jones, 2000; Liu & Ren, 2007; Poltarukha & Dautova, 2007; Poltarukha & Zvyagintsev, 2008).

**Genus *Archiacasta* Kolbasov, 1993**

*Archiacasta* Kolbasov, 1993: 407.

Type species *Archiacasta membranacea* (Barnard, 1924: 88); type locality South Africa, embedded in a sponge.

***Archiacasta spinitergum* Broch, 1931**

*Acasta spinitergum* Broch, 1931: 112, fig. 38  
*Archiacasta spinitergum*. — Kolbasov, 1993: 407.

**Distribution.** N Australia; Java Sea; Indonesia, Hong Kong; China; Philippines; embedded in sponge.

(252, 345); (44, 113b, 175, 205, 234, 259, 526, as *Acasta spinitergum*); (Leung & Jones, 2000; Liu & Ren, 2007).

**Genus *Euacasta* Kolbasov, 1993**

Kolbasov, 1993: 409.

Type species *Euacasta dofleini* Krüger, 1911a: 56; type locality Japan.

***Euacasta dofleini* (Krüger, 1911)\***

*Acasta dofleini* Krüger, 1911a: 56, pl. IV fig. 39a–d.  
*Acasta aperta* Hiro, 1931: 151, pl. 12 fig. 2–2c.  
*Acasta dofleini*. — Zevina et al., 1992: 59, fig. 39.  
*Euacasta dofleini*. — Kolbasov, 1993: 409, fig. 8.

**Distribution.** Australia; Indonesia; Sulu Arch.; **Singapore**; Malay Arch.; Thailand; Vietnam; S China Sea; Hong Kong; China; Philippines; S Japan; embedded in sponges (*Callyspongia diffusa* Ridley, 1884, *Cacospongia* sp., *Pseudaxnyssa* sp., *Reniera* sp.); littoral–280 m.

(252); (39, 44, 92, 113b, 182, 203, 205, 229, 234, 279, 280, 345, 347, 403, 428, 442, 514, 522, 528, 534, 536, as *Acasta dofleini*); (164, as *A. aperta* sp. nov.); (Zevina et al., 1992; Leung & Jones, 2000; Liu & Ren, 2007; Poltarukha & Zvyagintsev, 2008).

***Euacasta porata* (Nilsson-Cantell, 1921)**

*Acasta porata* Nilsson-Cantell, 1921: 346, fig. 75a–g. — Zevina et al., 1992:63, fig. 41.  
*Euacasta porata*. — Kolbasov, 1993: 409.

**Distribution.** Indo-west Pacific: Indian Ocean; Bay of Bengal; Sunda Is, Indonesia; Malay Arch.; Vietnam; Lien Chien, Tourane; Mindanao, Philippines; embedded in sponges (e.g., siliceous sponges with monoaxon spicules); 1–55 m.

(252); (44, 46, 92, 345, 347, 372, 442, as *Acasta porata*); (Zevina et al., 1992; Poltarukha & Dautova, 2007; Poltarukha & Zvyagintsev, 2008).

***Euacasta zuiho* (Hiro, 1936)**

*Acasta zuiho* Hiro, 1936a: 632, figs. 8, 9. — Dong et al., 1982: 105, fig.

*Euacasta zuiho*. — Kolbasov, 1993: 409.

**Distribution.** N of Port Darwin, N Australia; S China Sea; China; embedded in sponges.

(252); (95, 96, 176, 205, 234, 345, 428, as *Acasta zuiho*); (Liu & Ren, 2007).

**Genus *Neoacasta* Kolbasov, 1993**

Kolbasov, 1993: 407.

Type species *Acasta glans* Lamarck, 1818: 398; type locality unknown.

***Neoacasta glans* (Lamarck, 1818)**

*Acasta glans* Lamarck, 1818: 398.

*Neoacasta glans*. — Kolbasov, 1993: 407.

**Distribution.** Indo-west Pacific: Iranian Gulf; Bay of Bengal; Australia; Indonesia; Malay Arch.; S China Sea; China; Philippines; embedded in sponges; 15–55 m.

(252); (44, 127, 128, 200, 205, 234, 259, 290, 345, 372, 403, 428, 535, as *Acasta glans*); (Liu & Ren, 2007).

***Neoacasta laevigata* (Gray, 1825)**

*Acasta laevigata* Gray, 1825: 103.

*Neoacasta laevigata*. — Kolbasov, 1993: 407.

**Distribution.** Indo-west Pacific: Red Sea; Indian Ocean; Zanzibar; Andaman Is; Malay Arch.; China; Philippines; Japan; Palau Is; embedded in sponges (e.g., *Leiodermatium* sp.); littoral.

(252); (88, 118, 127, 128, 181, 200, 205, 345, 372, 428, 442, 593, as *Acasta laevigata*); (Liu & Ren, 2007).

**Genus *Pectinoacasta* Kolbasov, 1993**

*Pectinoacasta* Kolbasov, 1993: 411.

Type species *Acasta pectinipes* Pilsbry, 1912: 294; type locality ALBATROSS station 5276, near Malavatuan I., off southern Luzon, Philippines; 33 m.

***Pectinoacasta pectinipes* (Pilsbry, 1912)**

*Acasta pectinipes* Pilsbry, 1912: 294.

*Acasta nitida* Hoek, 1913: 237, pl. 24 figs. 17–19, pl. 25 figs. 1–3.

*Acasta komaii* Hiro, 1931: 149, pl. 12 figs. 1–1d.

*Pectinoacasta pectinipes*. — Kolbasov, 1993: 411.

**Distribution.** Indo-west Pacific: S Africa; Indian Ocean; Andaman Is; Australia; Java Sea; Sulu Arch.; Malay Arch.; S

China Sea; Hong Kong; China; Philippines (near Malavatuan Island, off S Luzon); Japan; embedded in sponges; 10–170 m.

(252); (27, 28, 39, 113b, 164, 182, 200, 234, 265, 282, 345, 372, 402, 403, 428, 512, 528, 536, 601, as *Acasta pectinipes*); (164, as *A. komaii* n. sp.); (200, as *A. nitida* n. sp.); (Leung & Jones, 2000; Liu & Ren, 2007).

***Pectinoacasta sculpturata* (Broch, 1931)**

*Acasta sculpturata* Broch, 1931: 101, fig. 35a–k. — Rosell, 1991: 50, fig. 7a.

*Acasta sculptura* Newman & Ross, 1976: 54.

*Pectinoacasta sculptura*. — Kolbasov, 1993: 411.

**Distribution.** Java Sea; Indonesia to Philippines; embedded in siliceous sponges; 49–97 m.

(252); (44, 345, 451, 526, as *Acasta sculptura*).

**SUBFAMILY BRYOZOBIINAE Ross & Newman, 1996****Genus *Eoatria* Van Syoc & Newman, 2010**

*Eoatria* Van Syoc & Newman, 2010: 5.

Type species. *Eoatria goslineri* sp. nov.; type locality Palau, Ngerikuul Pass, between Ngeteklau and Ngermeuange Islands; depth 18.9 m; attached to the cockscomb oyster *Lopha cristagalli* (Linnaeus, 1758) overgrown by the encrusting sponge *Clathria (Thalysias) tingens* Hooper, 1996.

***Eoatria quinquevittatus* (Hoek, 1913)\***

*Balanus quinquevittatus* Hoek, 1913: 216, pl. XXII, figs. 3–10.

*Eoatria quinquevittatus*. — Van Syoc & Newman, 2010: 9.

**Distribution.** Maldives, Banda Sea, 1°42.5'S 130°47.5'E; Indonesia (Ambon), **Singapore**, Viet Nam, Mergui Archipelago, Philippines, SW Japan, and Miocene of Algeria; 32 m; attached to gastropod shell.

(200) (Van Syoc & Newman, 2010).

**Genus *Multatria* Van Syoc & Newman, 2010**

*Multatria* Van Syoc & Newman, 2010: 9.

Type species. *Multatria filigranus* (Broch, 1916: 8); type locality 45 miles west-southwest of Cape Jaubert, Western Australia.

***Multatria terebratus* (Darwin, 1854)**

*Balanus terebratus* Darwin, 1854: 285, pl. VIII fig. 2a, b. — Hoek, 1913: 207, pl. XX, figs. 17–21, pl. XXI, figs. 1–3.

*Armatobalanus (Armatobalanus) terebratus*. — Newman & Ross, 1976: 49.

*Multatria terebratus*. — Van Syoc & Newman, 2010: 10, fig. 9.

**Distribution.** Indo-west Pacific: Madras, India; Ceylon; Mergui Arch.; N Australia; Kei Is; Malay Arch.; Gulf of Thailand; Palau Is; attached to corals; frequently over-grown by sponges; 0–55 m.

(4, 36, 38, 88, 92, 128, 171, 200, 234, 278, 345, 599); (181, 372, as *Balanus terebratus*), (345, Jones et al., 2000, as *Armatobalanus (Armatobalanus) terebratus*) (Van Syoc & Newman, 2010).

#### FAMILY PYRGOMATIDAE Gray, 1825

Balanidae Leach, 1817: 68 (part.). — Darwin, 1854: 33 (part.).  
Balaniinae. — Nilsson-Cantell, 1921: 306 (part.).  
Pyrgomatidae Gray, 1825: 102 — Newman, 1996: 503.  
Pyrgomatinae. — Ross & Newman, 1973: 149.

#### SUBFAMILY MEGATREMATINAE Holthuis, 1982

Bosciinae Newman & Ross, 1976: 59.  
Megatrematinae Holthuis, 1982: 319.

Type genus *Megatrema* Sowerby, 1823, by original designation of Holthuis (1982).

#### TRIBE PYRGOMINI Ross & Pitombo, 2002

Pyrgominini Ross & Pitombo, 2002: 58.

Type genus *Pyrgomina* Baluk & Radwanski, 1967.

#### Genus *Adna* Sowerby, 1823

*Adna* Sowerby, 1823: no pagination.

Type species *Pyrgoma anglica* Sowerby, 1823: no pagination, fig. 7; type locality 50°22'N, 4°10'W, off Devonport, Devon, UK.

#### *Adna anglica* (Sowerby, 1823)

*Pyrgoma anglicum* Sowerby, 1823: no pagination, fig. 7.  
*Megatrema (Adna) anglica* Gray, 1825: 103.  
*Pyrgoma anglicum*. — Darwin, 1854: 360 (part., pl. XII fig. 4a, c).  
*Boscia anglicum*. — Ross & Newman, 1973: 164, fig. 23a, b.  
*Boscia anglica*. — Newman & Ross, 1976: 59.  
*Adna anglica*. — Ross & Pitombo, 2002: 58. — Chan, 2009: 79, figs. 2 I, 24 A–H.

**Distribution.** North America; Mediterranean; Indo-west Pacific: Indian Ocean; Malay Arch.; S China Sea; China; Philippines; Japan; associated with corals: *Caryophyllia (Caryophyllia) smithii* Stokes & Broderip, 1828; *Dendrophyllia* sp.; *Heterocyathus* sp.

(42, 88, 128, 182, 372, 479, 501, as *Pyrgoma anglicum*); (205, 345, 429, 430, 462, as *Boscia anglica*); (Ross & Pitombo, 2002; Liu & Ren, 2007; Chan, 2009).

#### Genus *Pyrgomina* Baluk & Radwanski, 1967

*Pyrgomina* Baluk & Radwanski, 1967: 691.

Type species *Pyrgomina seguenzai* Baluk & Radwanski, 1967: 691, by original designation; type locality Crete (fossil).

#### *Pyrgomina oulastrea* (Utinomi, 1962)

*Pyrgoma anglicum* Hiro, 1935a: 9 (part., non fig. 4).  
*Creusia spinulosa* forma *quarta* Utinomi, 1949a: 35, fig. 6.  
*Pyrgoma oulastrea* Utinomi, 1962: 227, figs. 6–8.  
*Megatrema oulastrea*. — Utinomi, 1967: 229.  
*Boscia oulastrea*. — Ross & Newman, 1973: 164, fig. 23c–f.  
*Pyrgomina oulastrea*. — Ross & Pitombo, 2002: 61.

**Distribution.**?Kei Is (Broch, 1931); Hong Kong; China; S Japan; coral reefs, e.g., *Coscinaraea columna* (Dana, 1846); *Dendrophyllia* sp.; *Oulastrea crispata* (Lamarck, 1816); *Tubastrea* sp.

(113b, 205, 345, 462, 464, 528, 539); (512, as *Creusia spinulosa* forma *quarta*); (532, as *Megatrema oulastrea*); (Leung & Jones, 2000; Liu & Ren, 2007).

#### SUBFAMILY PYRGOMATINAE Gray, 1825

Balanidae Leach, 1817: 68 (part.). — Darwin, 1854: 33 (part.).  
Pyrgomatidae Gray, 1825: 102 (part.).  
Tetrameridae Gruvel, 1903: 159 (part.).  
Creusiinae Baluk & Radwanski, 1967: 468.  
Pyrgomatinae. — Ross & Newman, 1973: 149. — Newman, 1996: 503.

#### TRIBE PYRGOMATINI Ross & Newman, 1995

Pyrgomatini Ross & Newman, 1995: 133.

#### Genus *Cantellius* Ross & Newman, 1973

*Cantellius* Ross & Newman, 1973: 150. — Anderson, 1992: 329, figs. 7A, 10A, 11A, 12A, 13A, 14A, 37A–C, G, H, J, 38A–C, G, H, J.

Type species *Creusia spinulosa* forma *transversalis* Nilsson-Cantell, 1938b: 61, fig. 22a–d; type locality Andaman Islands (= *Creusia spinulosa* var. 7, fig. 6r Darwin, 1854: 380, type locality “probably Philippines”).

#### *Cantellius acutum* (Hiro, 1938)

*Creusia spinulosa* forma *acuta* Hiro, 1938d: 398, fig. 6c–f.  
*Creusia spinulosa* var. 6 (subvariety 2) Darwin, 1854: pl. 14 fig. 6n.  
*Cantellius acutum*. — Ross & Newman, 1973: 150, fig. 7ux. — Anderson, 1992: 295, figs. 11A–H, 16A–E, 37H, 38H.

**Distribution.** N Australia; Philippines; Japan; Palau Is.; on *Acropora formosa* (Dana, 1846) (now *A. muricata* (Linnaeus, 1758)); sublittoral.

(111, 128, 171, 187, 234, 262, 345, 347, 462, 528); (88, as *Creusia spinulosa* var. 6, subvar. 2).

***Cantellius euspinulosa* (Broch, 1931)\***

*Creusia spinulosa* Leach, 1824, pl. 57.  
*Creusia spinuleuse* Blainville, 1824: pl. 116 fig. 3.  
*Creusia spinulosa* var. (1) Darwin, 1854: 376, pl. 13 fig. 6a–d.  
*Creusia spinulosa* forma *eu-spinula* Broch, 1931: 118.  
*Cantellius euspinulosum*. — Ross & Newman, 1973: 150, fig. 7 g–i. — Jones et al., 1990: 17. — Anderson, 1992: 189, figs. 7A–D, 8A–E, 15A, 37A, 38A.  
*Cantellius euspinulosus*. — Zevina et al., 1992: 54, fig. 35.  
*Creusia spinulosa euspinulosa*. — Dong et al., 1982: 106, fig.

**Distribution.** Indo–west Pacific: Gulf of Elat; Bay of Bengal; Andaman Is; Mergui Arch.; N Australia; Indonesia; Amboina; Moluccas; **Singapore**; Malay Arch.; Vietnam; China; Sulu Arch.; Philippines; Japan (Pacific coast); Palau Is; associated with corals (*Acropora aculeus* (Dana, 1846); *A. cerealis* (Dana, 1846); *A. gemmifera* (Brook, 1892); *A. hyacinthus* (Dana, 1846); *A. nobilis* (Dana, 1846); *A. loripes* (Brook, 1892); *A. microphthalma* (Verrill, 1869); *A. nasuta* (Dana, 1846); *Astreopora listeri* Bernard, 1896; *A. myriophthalma* Lamarck, 1816; *Favites pentagona* (Esper, 1794); *Fungia fungites* (Linnaeus, 1758); *Herpetolitha* sp.; *Leptoria phrygia* (Ellis & Solander, 1786); *Montipora angulata* (Lamarck, 1816); *M. digitata* (Dana, 1846); *M. hispida* (Dana, 1846); *Pachyseris speciosa* (Dana, 1846); *Pavona decussata* (Dana, 1846); *Pocillopora damicornis* (Linnaeus, 1758); *Porites australiensis* Vaughan, 1918; *P. cylindrica* Dana, 1846; *P. lichen* Dana, 1846; *P. lobata* Dana, 1846; *P. lutea* Milne–Edwards & Haime, 1857; *P. rus* (Forskål, 1775); *P. solida* (Forskål, 1775); *Seriatopora hystrix* Dana, 1846; *Stylophora pistillata* (Esper, 1797).

(20, 30, 44, 96, 111, 127, 128, 187, 234, 262, 345, 462, 528); (88, as *Creusia spinulosa* var. 1); (95, 205, as *Creusia spinulosa euspinulosa*); (as *Creusia spinulosa* var. *euspinulosa* (var. 1)); (182, as *Creusia spinulosa* var. *euspinulosa*); (372, as *Creusia spinulosa* f. *euspinulosa*, nom. nov.); (512, as *Creusia spinulosa* f. *euspinulosa*); (Zevina et al., 1992; Achituv & Newman, 2002; Poltarukha & Dautova, 2007; Poltarukha & Zvyagintsev, 2008).

***Cantellius gregarius* (Sowerby, 1823)\***

*Creusia gregaria* Sowerby, 1823: no pagination.  
*Creusia spinulosa* var. (3) Darwin, 1854: 378, fig. 6h.  
*Creusia spinulosa* forma *gregaria*. — Broch, 1931: 118.  
*Creusia spinulosa* var. *gregaria* (var. 3). — Hiro, 1935a: 25.  
*Creusia spinulosa paeudoseptima*. — Kolosváry, 1951b: 292.  
*Cantellius gregarea*. — Ross & Newman, 1973: 150, fig. 8i, j.  
*Cantellius gregarius*. — Jones et al., 1990: 17. — Anderson, 1992: 295, fig. 13A–H, 37C, 38C.

**Distribution.** Indian Ocean; Bay of Bengal; N Australia; Banda Sea, Indonesia; Malay Arch.; **Singapore**; China; in *Acropora* sp.; associated with coral reefs; 0–70 m (*Acropora cytherea* (Dana, 1846)).

(128, 187, 205, 234, 262, 266, 345, 429, 430, 479); (44, as *Creusia spinulosa* forma *gregaria*); (88, as *Creusia spinulosa* var. 3); (171, as *Creusia spinulosa* var. *gregaria*

(var. 3)); (372, as *Creusia spinulosa* f. *gregaria* Broch, nom. nov.). (Liu & Ren, 2007).

***Cantellius iwayama* (Hiro, 1938)**

*Creusia spinulosa* forma *iwayama* Hiro, 1938d: 393, fig. 1d–f, pl. II.  
*Cantellius iwayama*. — Ross & Newman, 1973: 150, fig. 7n–i. — Soong & Chang, 1983: 249, fig. 12A–C. — Ren, 1986: 132, fig. 2, pl. 1 figs. 6–12.

**Distribution.** Yemen; Mauritius; Maldives; N Australia; Vietnam; China; Taiwan; Philippines; Palau I; Gilbert Is; Marshall Is; Enewetok Atoll; associated with corals, e.g., *Acropora* sp.; *Astreopora cucullata* Lamberts, 1980; *A. explanata* Veron, 1985; *A. gracilis* Bernard, 1896; *A. listeri* Bernard, 1896; *A. moretonensis* Veron & Wallace, 1984; *A. myriophthalma* Lamarck, 1816; *A. ocellata* Bernard, 1896; *Isopoa cuneata* (Dana, 1846)), *Porites iwayamaensis* Eguchi, 1938 (now *P. rus* (Forskål, 1775)).

(205, 345, 429, 462); (187, as *Creusia spinulosa* forma *iwayama*) (Soong & Chang, 1983; Achituv & Newman, 2002; Liu & Ren, 2007; Poltarukha & Dautova, 2007; Poltarukha & Zvyagintsev, 2008).

***Cantellius madreporum* (Borradaile, 1903)**

*Pyrgoma madreporum* Borradaile, 1903: 443, fig. 119.  
*Pyrgoma madreporarum* [sic]. — Nilsson-Cantell, 1938b: 13, 65.  
*Cantellius madreporae*. — Ross & Newman, 1973: 150 fig. 7f.  
*Cantellius madreporum*. — Newman & Ross, 1976: 57.

**Distribution.** Maldives; ?Gulf of Thailand; associated with coral reefs (*Madrepora* sp.).

(36, 92, 171, 200, 345, 372, 462).

***Cantellius pallidus* (Broch, 1931)\***

*Creusia spinulosa* forma *pallida* Broch, 1931: 118.  
*Creusia spinulosa* var. *pallida*. — Hiro, 1935: 50, fig. 2.  
*Creusia pallida*. — Dong et al., 1980: 127.  
*Cantellius pallidus*. — Ross & Newman, 1973: 152, fig. 8o–r. — Soong & Chang, 1983: 251, fig. 17A–D.  
*Creusia spinulosa pallida*. — Dong et al., 1982: 106, fig.

**Distribution.** Indo-west Pacific: Maldives; N Australia; Banda Sea, Indonesia; **Singapore**; S China Sea; Hong Kong; China; Taiwan; Philippines; Japan; Fiji; associated with corals – e.g., *Acropora cuneata* Dana, 1846; *Acropora prolifera* Lamarck, 1816; *A. listeri* Bernard, 1896; *A. moretonensis* Veron & Wallace, 1984; *Astreopora gracilis* Bernard, 1896; *A. myriophthalma* Lamarck, 1816; *A. ocellata* Bernard, 1896; *Alveopora* sp.; *Cyphastrea serailia* (Forskål, 1775); *Lobophyllia corymbosa* (Forskål, 1775); *Merulina amplicata* (Ellis & Solander, 1786 (as *M. ampliata* (Ellis & Solander, 1786); *Montipora foliosa* (Pallas, 1766); *M. striata* Bernard, 1897 (now *M. stellata* Bernard, 1897); *M. solanderi* Bernard, 1897; *M. sinensis* Bernard, 1897 (now *M. monasteriata* (Forskål, 1775); *M. listeri* Bernard, 1896 (now *Astreopora listeri* Bernard, 1896); *M. gaimardi*

Bernard, 1897; *Pachyseris speciosa* (Dana, 1846); *Pavona frondifera* Lamarck, 1816; *P. minikoiensis* (Gardiner, 1905) (now *Agariciella minikoiensis* (Gardiner, 1905)); *P. praetorta* Dana, 1846 (now *P. cactus* (Forskål, 1775)); *P. lata* Dana, 1846; *Pocillopora brevicornis* Lamarck, 1816; *P. damicornis* (Linnaeus, 1758); *P. danae* Verrill, 1864 (now *P. verrucosa* (Ellis & Solander, 1786)); *P. eydouxi* Milne-Edwards & Haime, 1860; *P. maeandrina nobilis* (Verrill, 1864); *Porites lutea* Milne-Edwards & Haime, 1860; *Stylophora mordax* (Dana, 1846); *S. pistillata* (Esper, 1797).

(44, 96, 113b, 187, 234, 261, 262, 345, 429, 430, 462); (95, as *Creusia spinulosa pallida*); (171, 182, 205, as *Creusia spinulosa* var. *pallida*); (Soong & Chang, 1983; Leung & Jones, 2000; Achituv & Newman, 2002; Liu & Ren, 2007).

#### *Cantellius secundus* (Broch, 1931)\*

*Creusia spinulosa* var. 2 Darwin, 1854: 378, pl. XIII figs. 6e–g.  
*Creusia spinulosa* forma *secunda* Broch, 1931: 118.  
*Cantellius secundus*. — Ross & Newman, 1973: 153, fig. 8a–d.  
— Soong & Chang, 1983: 251, fig. 16A, B. — Jones et al., 1990: 17. — Anderson, 1992: 299, fig. 14A–H, 15B, 37J, 38J.  
*Creusia spinulosa* var. *secunda* (var. 2). — Hiro, 1935a: 25.

**Distribution.** Indo-west Pacific: Red Sea; N Australia; Andaman Is; Kei Is; Malay Arch.; **Singapore**; Vietnam; Hong Kong; China; Taiwan; Japan; Palau Is; associated with corals *Acropora formosa* (Dana, 1846) (= *A. muricata* (Linnaeus, 1758)); *A. gemmifera* (Brook, 1892); *Eumadrepora abrotanoides* (Lamarck, 1816); *Pavoniai* sp.; 0–20 m.

(110, 113b, 127, 128, 234, 345, 429, 430, 462, 528, 539, 593); (44, 187, 261, as *Creusia spinulosa* forma *secunda*); (88, as *Creusia spinulosa* var. 2); (171, as *Creusia spinulosa* var. *secunda* (var. 2)); (372, as *Creusia spinulosa* f. *secunda*, nom. nov.); (Leung & Jones, 2000; Soong & Chang, 1983; Liu & Ren, 2007; Poltarukha & Dautova, 2007; Poltarukha & Zvyagintsev, 2008).

#### *Cantellius septimus* (Hiro, 1938)

*Creusia spinulosa* var. 7 Darwin, 1854: 380, fig. 6r.  
*Creusia spinulosa* forma *septima*. — Hiro, 1938d: 395, fig. 4 a–d, pl. II.  
*Creusia spinulosa duodecima* Kolosváry, 1941c: 9.  
*Cantellius septimus*. — Ross & Newman, 1973: 153, fig. 8e, k–m.  
— Soong & Chang, 1983: 250, fig. 13AD.

**Distribution.** Indo-west Pacific: Indian Ocean; N Australia; Vietnam; China; Taiwan; Philippines; Kermadec Is; Palau Is; associated with *Acropora* sp.; *Montipora* cf. *cactus* Bernard, 1897; *M. caliculata* (Dana, 1846); *M. fragilis* Quelch, 1886; *M. foliosa* (Pallas, 1766); *M. fruticosa* Bernard, 1897 (= *M. digitata* (Dana, 1846)); *M. gaimardi* Bernard, 1897; *M. monasteriata* (Forskål, 1775); *M. ramosa* Bernard, 1897 (now *M. angulata* (Lamarck, 1816)); *M. solanderi* Bernard, 1897 (now *M. stellata* Bernard, 1897); *M. striata* Bernard, 1897 (now *M. stellata* Bernard, 1897); 0–20 m.

(234, 256, 259, 262, 345, 429, 430, 431); (187, as *Creusia spinulosa* forma *septima*); (88, 261, 347, as *Creusia spinulosa* var. 7); (Soong & Chang, 1983; Achituv, 2004; Liu & Ren, 2007; Poltarukha & Dautova, 2007; Poltarukha & Zvyagintsev, 2008).

#### *Cantellius transversalis* (Nilsson-Cantell, 1938)

*Creusia spinulosa* var. 6, subvar. 1 Darwin. 1854: 379, fig. 6n–q.  
*Creusia spinulosa* forma *transversalis*. — Nilsson-Cantell, 1938b: 61, fig. 22a–d.  
*Cantellius transversalis*. — Ross & Newman, 1973: 151, fig. 7 j–m. — Soong & Chang, 1983: 249, fig. 11A–G.

**Distribution.** Indo-west Pacific: Indian Ocean; Andaman Is; Malay Arch.; Taiwan; Philippines; associated with corals, e.g., *Acropora* sp.; *Madrepora* sp.

(127, 128, 345, 347, 372, 462) (88, as *Creusia spinulosa* var. 6 subvar. 1) (372, as nom. nov.); (Soong & Chang, 1983).

#### *Cantellius tredecimus* (Kolosváry, 1947)\*

*Creusia spinulosa* forma *tredecima* Kolosváry, 1947b: 426, fig. 1.  
*Cantellius tredecimus*. — Ross & Newman, 1973: 151, fig. 7s, t. — Soong & Chang, 1983: 251, fig. 15A, B.

**Distribution.** **Singapore**; N Australia; Taiwan; associated with corals, e.g., *Astreopora gracilis* Bernard, 1896; *Montipora* sp.; *Tridacophyllia lactuca* Pallas, 1766 (now *Pectinia lactuca* (Pallas, 1766)).

(261, 262, 345); (Soong & Chang, 1983; Achituv & Newman, 2002).

#### Genus *Darwiniella* Anderson, 1992

*Pyrgoma* (part.) Leach, 1817: 67. — Leach, 1818: 171. — Leach, 1824: 171.  
*Nobia* (part.). — Ross & Newman, 1973: 155.  
*Darwiniella* Anderson, 1992: 329, figs. 20A–C, 37F, 38F (figures designated as *Nobia conjugatum*).

Type species *Pyrgoma conjugatum* Darwin, 1854: 364, pl. 12 fig. 7a–c, by monotypy; type locality Red Sea.

#### *Darwiniella conjugatum* (Darwin, 1854)\*

*Pyrgoma conjunctum* Darwin, 1854: 364, pl. 12 fig. 7a–c. — Dong et al., 1982: 107, fig.  
*Pyrgoma* (*Nobia*) *conjugatum*. — Baluk & Radwanski, 1967: 487.  
*Nobia conjugatum*. — Ross & Newman, 1973: 155, fig. 12d, e. — Soong & Chang, 1983: 245, fig. 3A, B. — Ogawa & Matsuzaki, 1990: 74, table 1.  
*Darwiniella conjugatum*. — Anderson, 1992: 329, figs. 38F, 39. — Chen et al., 2012: 56, figs. 10A–F, 11A–H, 12A–H, 13A–H, 14A–F, 15A–H, 16A–H, 17A–H.  
*Darwiniella conjugata*. — Asami & Yamaguchi, 1997: 13, 14, figs. 1, 2.

**Distribution.** Indo-west Pacific: Red Sea; Mauritius, Bay of Bengal, Sri Lanka (Ceylon); Mergui Arch; Australia



(N and Great Barrier Reef); **Singapore**; Thailand (Gulf of Siam); Vietnam; Hong Kong; South China Sea; China; Sulu Arch.; Philippines; Japan; associated with corals *Cyphastrea chalcidum* (Forskål, 1775); *C. conjugatum* (Forskål, 1775); *C. serailia* (Forskål, 1775); *C. japonica* Yabe & Sugiyama, 1932; *Cyphastrea* sp.; *Euphyllia ancora* Veron & Pichon, 1980; *Goniastrea* sp.

(96, 113b, 205, 234, 261, 345, 429, 430); (4, 39, 46, 88, 95, 128, 164, 182, 200, 372, as *Pyrgoma conjugatum*); (462, as *Nobia conjugatum*); (Soong & Chang, 1983; Asami & Yamaguchi, 1997; Leung & Jones, 2000; Liu & Ren, 2007; Poltarukha & Dautova, 2007; Poltarukha & Zvyagintsev, 2008).

### Genus *Galkinius* Perreault, 2014

*Utinomia* Galkin, 1986: 1290 (non *Utinomia* Tomlinson, 1963, an acrothoracican)

*Galkinia* Ross & Newman, 1995: 132 (pro *Utinomia* Galkin, 1986).  
*Galkinius* Perreault, 2014: 450 (pro *Galkinia* Ross & Newman, 1995).

Ross & Newman (1995) proposed *Galkinia* as a replacement name for *Utinomia* Galkin, 1986, which was pre-occupied by *Utinomia* Tomlinson, 1963, an acrothoracican. More recently, Perreault (2014) proposed *Galkinius* as a replacement name for *Galkinia* Ross & Newman, 1995, which itself was pre-occupied by a genus of fossil fish, *Galkinia* Ghekker, 1948.

Type species *Pyrgoma indicum* Annandale, 1924: 64, pl. 12 figs. 9–15 a, by original designation; type locality Padaw Bay, King I., Mergui Archipelago; on corals, e.g., *Favites abdita* (Ellis & Solander, 1786); *F. valenciennesi* Milne-Edwards & Haime, 1848 [now *Montastrea valenciennesi* (Milne-Edwards & Haime, 1848)].

### *Galkinius decimus* (Ross & Newman, 1973)\*

*Creusia spinulosa* var. 10 Darwin, 1854: 381, pl. XIV, fig. 6t. — Gruvel, 1905a: 301, fig. 323 X.

*Creusia decima* Ross & Newman, 1973: 154, fig. 10 d. — Newman & Ross, 1976: 57.

*Utinomia decima*. — Galkin, 1986: 1291.

*Rossia projectum*. — Anderson, 1992: 302–306, 329, figs. 18, 37 D, 38 D [non *Rossia projectum*].

*Galkinia decima*. — Ross & Newman, 1995: 154, fig. 10d. — Ogawa et al., 1998: 9, fig. 8. — Ogawa, 2000: 35, fig. 10. — Chan, Chen & Lin, 2013: 403, figs. 11–15, 36F.

*Galkinius decimus*. — Perreault, 2014: 450 [by inference].

**Distribution.** Indo-West Pacific: Mauritius, **Singapore**, Vietnam, Taiwan, Palau; attached to corals, e.g., *Montastrea* sp., *Montipora hispida* (Dana, 1846).

(88, 128, 345, 462, 463) (Galkin, 1986; Anderson, 1992; Ogawa et al., 1998; Ogawa, 2000; Poltarukha & Dautova, 2007; Poltarukha & Zvyagintsev, 2008; Chan, Chen & Lin, 2013; Perreault, 2014).

### *Galkinius indicus* (Annandale, 1924)\*

*Creusia spinulosa* var. (11) Darwin, 1854: 381, pl. 14 fig. 6u.

*Pyrgoma indicum* Annandale, 1924: 64, pl. 12 figs. 9–15a.

*Pyrgoma indicum* phase *merulinae* Annandale, 1924: 65, pl. 12 figs. 12, 14.

*Pyrgoma indicum* phase *symphylliae* Annandale, 1924: 65.

*Creusia spinulosa* forma *angustiradiata* Broch, 1931: 118.

*Creusia spinulosa* var. *angustiradiata* Hiro, 1935a: 51, fig. 3a–d.

*Creusia indica*. — Utinomi & Kikuchi, 1966: 7. — Dong et al., 1982: 107, fig.

*Creusia indicum*. — Ross & Newman, 1973: 154, fig. 10a, b. — Foster, 1982: 225 (part., see pl. 1 f). — Ross & Newman, 1995: 166.

*Creusia indicum*. — Soong & Chang, 1983: 247, fig. 9A, B. — Ren, 1986: 144; fig. 10, pl. 4 figs. 9–14.

*Galkinia indica*. — Ross & Newman, 1995: 166. — Asami & Yamaguchi, 1997: 13. — Ogawa et al., 1998: 10, fig. 9. — Ogawa, 2000: 35. — Ross & Yamaguchi, 2001: 60, figs. 1–3. — Chan, Chen & Lin, 2013: 415, figs. 23–27, 36D.

*Galkinia* sp. cf. *G. indica*. — Ross & Newman, 2000b: 587.

*Galkinius indicus*. — Perreault, 2014: 450 [by inference].

**Distribution.** Indo-west Pacific: Indian Ocean; Bay of Bengal; Mergui Arch.; Kei Is.; **Singapore**; Malay Arch.; Vietnam; Hong Kong; China; Taiwan; Philippines; Japan; Palau Is; associated with corals, e.g., *Favia palauensis* Yabe & Sugiyama, 1936 (now *Goniastrea palauensis* (Yabe & Sugiyama, 1936)); *F. speciosa* (Dana, 1846 (now *Dipsastraea speciosa* (Dana, 1846))); *F. valenciennesi* Milne-Edwards & Haime, 1848 (now *Montastrea valenciennesi* (Milne-Edwards & Haime, 1848)); *Fungia fungites* (Linnaeus, 1758); *Goniastrea aspera* (Verrill, 1866); *G. yamanarii* (Yabe & Sugiyama, 1935) (now *Favites chinensis* (Verrill, 1866)); *Hydnophora exesa* (Pallas, 1766); *H. rigida* (Dana, 1846); *Montastrea* sp.; *Podabacia crustacea* (Pallas, 1766).

(26, 95, 96, 113b, 345, 429, 430, 511); (20, as *Pyrgoma indicum* phase *merulinae* nov. and phase *symphylliae* nov.); (44, 187, as *C. spinulosa* forma *angustiradiata* nov.); (88, 200, as *C. spinulosa* var. 11); (171, 182, as *C. spinulosa* var. *angustiradiata* nov.); (205, as *Creusia indicum*); (372, as *Creusia spinulosa* forma *angustiradiata*); (528, as *Pyrgoma indicum*); (532, 539, as *Creusia indica*); (Leung & Jones, 2000; Soong & Chang, 1983; Asami & Yamaguchi, 1997; Ogawa et al., 1998; Ogawa, 2000; Ross & Newman, 2000a; Ross & Newman, 2000b; Ross & Yamaguchi, 2001; Liu & Ren, 2007; Poltarukha & Dautova, 2007; Poltarukha & Zvyagintsev, 2008; Chan, Chen & Lin, 2013).

### Genus *Hiroa* Ross & Newman, 1973

*Hiroa* Ross & Newman, 1973: 153.

Type species *Hiroa stubbingsi* Ross & Newman, 1973: 153, fig. 9; type locality Ollan Island, Truk Island, 7°14'N, 151°38'E.

### *Hiroa stubbingsi* Ross & Newman, 1973

*Hiroa stubbingsi* Ross & Newman, 1973: 153, fig. 9. — Soong & Chang, 1983: 248, fig. 10A–E.

**Distribution.** Red Sea; E Africa; Indian Ocean; Reunion Is; Seychelles; NE Australia; Indonesia; Sulawesi; Vietnam; Philippines; Taiwan; Japan; New Caledonia; Marshall Is; Caroline Is; Truk Is; Gilbert Is; Tonga Is. associated with corals, e.g., *Astreopora cucullata* Lamberts, 1980; *A. expansa* (Brüggemann, 1877); *A. gracilis* Bernard, 1896; *A. incrustans* Bernard, 1896; *A. listeri* Bernard, 1896; *A. myriophthalma* Lamarck, 1816; *A. ocellata* Bernard, 1896; *A. listeri* Bernard, 1896; *A. moretonensis* Veron & Wallace, 1984; *Stylophora* sp.).

(462); Ross & Newman, 2000b; Achituv & Newman, 2002; Poltarukha & Dautova, 2007; Poltarukha & Zvyagintsev, 2008).

### Genus *Neotrevathana* Ross, 1999

*Neotrevathana* Ross, 1999: 835.

Type species *Pyrgoma elongatum* Hiro, 1931: 154, pl. 14 figs. 2, 2b; type locality Seto, Honshu I., Japan (32°58'N, 129°39'E); on coral, e.g., *Madrepora* sp.

#### *Neotrevathana elongatum* (Hiro, 1931)

*Pyrgoma elongatum* Hiro, 1931: 154, pl. XIV fig. 2, 2 b.

*Savignium elongatum*. — Ross & Newman, 1973: 159, fig. 17n.

*Neotrevathana elongatum*. — Ross, 1999: 835, fig. 1.

Non *Newmania elongatum*. — Anderson, 1992: 320, fig. 31 (= *Wanella andersonorum* Ross, 1999: 835).

Non *Wanella elongatum*. — Anderson, 1993: 377 (= *Wanella andersonorum* Ross, 1999: 835).

**Distribution.** Indo-west Pacific: Australia; Gulf of Siam; Hong Kong; China; Japan; Palau Is; associated with corals, e.g., *Madrepora* sp.

(92, 113b, 164, 171, 182, 187, 205, 345, 462); (Anderson, 1992; Anderson, 1993; Ross, 1999; Leung & Jones, 2000; Liu & Ren, 2007).

### Genus *Nobia* Sowerby, 1823\*

*Nobia* Sowerby, 1823: no pagination; 1839: 71, fig. 29.

*Nobia* (part.). — Anderson, 1992: 330, figs. 34, 36A–C, 37I, 38I.

Type species *Nobia grandis* Sowerby, 1839: 71, fig. 29; type locality **Singapore** (designated by Ross & Newman (1973: 155) by monotypy).

#### *Nobia grandis* Sowerby, 1839\*

*Nobia grandis* Sowerby, 1839: 71, fig. 29. — Ross & Newman, 1973: 155, figs. 11, 12a–c. — Soon & Chang, 1983: 245, fig. 4A, B.

*Creusia grandis*. — Chenu, 1843: pl. 1 fig. 2a, sed non fig. 2.

*Pyrgoma grande*. — Darwin, 1854: 365, pl. 13 fig. 1a–d.

**Distribution.** Indo-west Pacific: Mergui Arch.; Maldives; N Australia; Indonesia; Kei Is; **Singapore**; Gulf of Thailand; Vietnam; Hong Kong; China; Taiwan; Japan; Palau Is.; on corals, e.g., *Caryophyllia* sp.; *Cyphastraea chalcidum*

(Forskål, 1775); *Euphyllia* sp.; *Galaxea astreata* (Lamarck, 1816); *G. musicalis* (Linnaeus, 1767) (now *G. astreata* (Lamarck, 1816)); *Goniophora* sp.; *Halomitra* sp., *Porites lobata* Dana, 1846.

(20, 30, 36, 44, 88, 92, 113b, 128, 164, 171, 182, 187, 200, 205, 234, 261, 262, 278, 345, 347, 372, 462, 482, 547); (Soon & Chang, 1983; Leung & Jones, 2000; Liu & Ren, 2007; Poltarukha & Dautova, 2007; Poltarukha & Zvyagintsev, 2008; Shen et al., 2016a).

### *Nobia orbicellae* (Hiro, 1934)\*

*Pyrgoma orbicellae* Hiro, 1934: 367, fig. 2.

*Pyrgoma goniopora* Nilsson-Cantell, 1938b: 73, pl. 3 figs. 5, 6.

*Nobia orbicellae*. — Ross & Newman, 1973: 155, fig. 10k, l, fig. 12k, l.

**Distribution.** Indo-west Pacific: Mergui Arch.; **Singapore**; China; Japan; Palau Is; Fiji; associated with corals *Galaxea fascicularis* (Linnaeus, 1767), *G. lamarcki* Milne-Edwards & Haime, 1851 (now *Agaricia lamarcki* Milne-Edwards & Haime, 1851); *Goniopora* sp.

(205, 259, 260, 345, 372, 429, 430, 462); (170, 171, 182, 187, as *Pyrgoma orbicellae*); (372, as *Pyrgoma goniopora*); (Liu & Ren, 2007).

### Genus *Pyrgoma* Leach, 1817

*Pyrgoma* Leach, 1817: 67. — Leach, 1818: 171. — Leach, 1824:

171. — Darwin, 1854: 354. — Ross & Newman, 1973: 156.

— Newman & Ross, 1976: 58. — Holthuis, 1982: 316.

*Paranobia* Galkin, 1986: 1293. — Newman, 1996: 503.

Type species *Pyrgoma cancellata* Leach, 1818: 171, pl. 57; type locality Shirahama, Honshu I., Japan, (33°40'N, 135°20'E), on *Turbinaria contorta* Bernard, 1896; by subsequent designation (Ross & Newman, 1973: 156). Genus without originally included nominal species; first species assigned to genus *Pyrgoma cancellata* Leach, 1818; type species by subsequent monotypy (Leach, 1818: 171) and by subsequent designation (Brooks & Ross, 1960: 354).

#### *Pyrgoma cancellata* Leach, 1818

*Pyrgoma cancellata* Leach, 1818: 171, pl. 57. — Soon & Chang, 1983: 246, fig. 5A–E.

*C [reusia] cancellata*. — Blainville, 1824: 378.

*Pyrgoma cancellatum*. — Darwin, 1854: 362 (part.), pl. 12 fig. 5b–f.

*Creusia cancellata* Des Moulins, 1866: 309.

**Distribution.** Indo-west Pacific: Indian Ocean; Mergui Arch.; Maldives; N Australia; Malay Arch.; Gulf of Siam; Vietnam; Hong Kong; China; Taiwan; Philippines; Japan; Palau Is; associated with corals *Dendrophyllia japonica* Rehberg, 1892 (now *Eguchipsammia japonica* (Rehberg, 1892); *D. micranthus grandis* Crossland, 1952 (= *Tubastrea micranthus* (Ehrenberg, 1834)); *Turbinaria contorta* (Bernard, 1896); *T. mantonae* Crossland, 1952 (now *T. stellulata* (Lamarck, 1816)); *T. mesenterina* (Lamarck, 1816); *Turbinaria* sp.

(36, 88, 92, 113b, 129, 171, 182, 187, 200, 205, 234, 280, 293, 345, 372, 429, 430, 462, 522, 528, 539); (279, as var. *japonica*); (547, as var. *japonica* nov.); (Soon & Chang, 1983; Leung & Jones, 2000; Liu & Ren, 2007; Poltarukha & Zvyagintsev, 2008).

### Genus *Savignium* Leach, 1825\*

*Savignium* (part.) Leach, 1825: 210.  
*Savignium*. — Anderson, 1992: 330, figs. 33A–C, 37, 38 O.  
*Daracia* Gray, 1825: 102.  
*Doracia* (error for *Daracia* Gray, 1825). — Weltner, 1897: 278.

Genus without originally included nominal species; first species assigned to genus *Daracia linnaei* Gray, 1825 (= *obia*); type locality **Singapore** Island (designated by Ross & Newman, 1973: 158, fig. 15, 17 ad); ipso facto type species by subsequent monotypy (Gray, 1825: 102).

### *Savignium crenatum* (Sowerby, 1823)\*

*Pyrgoma crenatum* Sowerby, 1823: no pagination. — Darwin, 1854: 370, pl. 13 fig. 4a, b.  
*Pyrgoma crenatum* phase *tridacophylliae* nov. Annandale, 1924: 66.  
*Pyrgoma crenatiformis* Kolosváry, 1951a: 287.  
*Savignium crenatum*. — Ross & Newman, 1973: 159, fig. 17a, b. — Soong & Chang, 1983: 247, fig. 8A–E. — Jones et al., 1990: 17. — Anderson, 1992: 323, figs. 33A–H, 37O, 38O.

**Distribution.** Indo-west Pacific: Indian Ocean; Mergui Arch.; Great Barrier Reef, Australia; **Singapore**; Malay Arch.; Vietnam; Hong Kong; China; Taiwan; Philippines; Japan; Line Is; Palau Is; associated with corals (*Cyphastrea chalcidicum* (Forskål, 1775); *Favites abdita* (Ellis & Solander, 1786); *F. halicora* (Ehrenberg, 1834); *F. pentagona* (Esper, 1794); *Goniastrea aspera* (Verrill, 1866); *Merulina ampliata* (Ellis & Solander, 1786); *Montastrea* sp.; *Platygyra* sp.; *Tridacophyllia lactuca* Pallas, 1766 (now *Pectinia lactuca* (Pallas, 1766))); 0–20 m.

(113b, 187, 205, 234, 345, 429, 430, 462, 479, 547); (20, as *Pyrgoma crenatum* phase *tridacophylliae* nov.) (44, 88, 98, 128, 171, 182, 259, 261, 262, 265, 372, 403, 512, 539, as *Pyrgoma crenatum*); (Soong & Chang, 1983; Leung & Jones, 2000; Liu & Ren, 2007; Poltarukha & Dautova, 2007; Poltarukha & Zvyagintsev, 2008).

### Genus *Trevathana* Anderson, 1992

*Pyrgoma* (part.) Leach, 1817: 67. — Leach, 1818: 171. — Leach, 1824: 171.  
*Savignium* (part.) Leach, 1825: 210.

*Trevathana* Anderson, 1992: 329, 330, figs. 28A–C, 37L, 38L (figs. designated as *Savignium dentatum* Darwin, 1854).

Type species *Pyrgoma dentatum* Darwin, 1854: 369, pl. 13, figs. 3a–g; type locality Red Sea.

### *Trevathana dentatum* (Darwin, 1854)

*Pyrgoma dentatum* Darwin, 1854: 369, pl. 13, fig. 3a–g.  
*Savignium dentatum*. — Ross & Newman, 1973: 159, fig. 17h–k. — Soong & Chan 1983: 246, fig. 7A–D.  
*Trevathana dentatum*. — Anderson, 1992: 329.

**Distribution.** Indo-west Pacific: Red Sea; N Australia; Malay Arch.; Vietnam; Gulf of Thailand; New Guinea; Hong Kong; China; Taiwan; Japan; Palau Is; associated with corals: *Cyphastrea* sp.; *Favites pentagona* (Esper, 1794); *Goniastrea* sp.; *Meandrina spongiosa* Dana, 1846 (now *Alveopora spongiosa* (Dana, 1846)); *Tubastrea* sp.; 0–20 m.

(92, 113b, 128, 135, 164, 205, 234, 262, 345, 372, 429, 430, 462, 547); (88, 182, 187, as *Pyrgoma dentatum*); (Soong & Chan, 1983; Leung & Jones, 2000; Anderson, 1992; Liu & Ren, 2007; Poltarukha & Zvyagintsev, 2008).

### *Wanella* Anderson, 1993

*Pyrgoma* (part.) Leach, 1817: 67. — Leach, 1818: 171. — Leach, 1824: 171.  
*Savignium* (part.) Leach, 1825: 210.  
*Newmania* Anderson, 1992: 329, 330, figs. 29A–H, 30A–G, 31A–I, 32A–C, 37M, N, 38M, N (figs. 29A–H, 30A–G, 37M, 38M, designated as *Savignium milleporum*; figs. 31A–I, 32A–C, 37N, 38N designated as *S. elongatum*).  
*Wanella* Anderson, 1993: 377 (nomen novum for *Newmania*).

Type species *Pyrgoma milleporae* Darwin, 1854: 367, pl. 13, fig. 2a–f; type locality Philippine Arch. (Mindoro I.); on coral *Millepora complanata* Lamarck, 1816 (see Remarks), sometimes associated with *Megabalanus ajax* (Darwin, 1854).

**Remarks.** Ross (1999: 834) states “...according to Boschma (1948: 34), *Millepora complanata* Lamarck, 1816 ...ranges throughout the tropical W Atlantic and is not known to occur in the Philippines or elsewhere in the W Pacific region” and suggested that the host is “most probably *Millepora platyphylla* Hemprich & Ehrenberg, 1834 [in Ehrenberg, 1834]”. Tsang et al. (2014) have recently shown that *Wanella* is situated outside the molecular Pyrgomatidae clade. The taxonomic position of *Wanella* should, therefore, be re-evaluated in future studies.

### *Wanella milleporae* (Darwin, 1854)

*Pyrgoma milleporae* Darwin, 1854: 367, pl. 13, fig. 2a–f.  
*Pyrgoma milleporae* forma *typical* Kolosváry, 1950: 292.  
*Pyrgoma milleporae* forma *snellius* Kolosváry, 1950: 292.  
*Savignium milleporum*. — Ross & Newman, 1973: 159, fig. 16. — Jones et al., 1990: 17.  
*Savignium milleporae*. — Soong & Chang, 1983: 246, fig. 6A–D.  
*Newmania milleporum*. — Anderson, 1992: 329.  
*Wanella milleporum*. — Anderson, 1993: 377.  
*Wanella milleporae*. — Ross, 1999: 833.

**Distribution.** Indo-west Pacific: N Australia; Vietnam; China; Taiwan; east to Palau Is and Fiji; associated with corals, *Millepora* sp.; *M. complanata* Lamarck, 1816; *M.*

*platyphylla* Hemprich & Ehrenberg, 1834 [in Ehrenberg, 1834]; 0–5 m.

**Remarks.** Tsang et al. (2009) reported that *Wanella milleporae* is host-specific and appears to include several cryptic species. The genetic and morphological differentiation of individuals from four different *Millepora* host species were examined, revealing five distinct clades. Although not displaying species-level host specificity, the clades showed significant differences regarding preference of host growth form, and could be divided into two major lineages congruent with the morphology of the host coral.

(30, 171, 175, 205, 234, 345, 430, 462, 547); (44, 88, 111, 128, 187, 200, 347, 372, as *Pyrgoma milliporae*); (263, as *Pyrgoma milliporae* forma *typica* nov.; as *Pyrgoma milliporae* forma *snellius* nov.); (Anderson, 1992; Anderson, 1993; Soong & Chang, 1983; Liu & Ren, 2007; Poltarukha & Dautova, 2007; Poltarukha & Zvyagintsev, 2008; Tsang et al., 2009).

#### TRIBE HOEKIINI Ross & Newman, 1995

Hoekiini Ross & Newman, 1995: 146.

##### Genus *Ahoekia* Ross & Newman, 1995

*Ahoekia* Ross & Newman, 1995: 146.

Type species *Ahoekia tanabensis* Ross & Newman, 1995: 147; type locality Tanabe Bay, Honshu I., Japan; associated with corals *Hydnophora ?exesa* (Pallas, 1766); *H. bonsai* Veron, 1990.

##### *Ahoekia chuangi* Ross & Newman, 1995

*Ahoekia chuangi* Ross & Newman, 1995: 147, fig. 14a–c.

**Distribution.** Bay of Batavia, Java Sea, Indonesia; associated with coral *Hydnophora rigida* (Dana, 1846).

(463).

##### Genus *Hoekia* Ross & Newman, 1973\*

*Hoekia* Ross & Newman, 1973: 161.

Type species *Pyrgoma monticulariae* Gray, 1831: 6; type locality **Singapore**; on coral *Hydnophora exesa* (Pallas, 1766).

##### *Hoekia fornix* Ross & Newman, 1995

*Hoekia fornix* Ross & Newman, 1995: 140, fig. 8a, b.

**Distribution.** Moluccas, Indonesia (1°47.5'S, 126° 59.5'E); associated with coral *Hydnophora exesa* (Pallas, 1766).

(463).

##### *Hoekia monticulariae* (Gray, 1831)\*

*Pyrgoma monticulariae* Gray, 1831: 6.

*Hoekia monticulariae*. — Ross & Newman, 1973: 162, figs. 18, 19. — Ross & Newman, 1995: 140, figs. 9a–c, 10a–k, 15a–c, 17a, b, 18a, 19a–c.

**Distribution.** Indo-west Pacific: Indian Ocean; Mauritius; Bay of Bengal; **Singapore**; Malay Arch.; Japan; associated with coral *Hydnophora exesa* (Pallas, 1766).

(20, 26, 88, 119, 128, 164, 171, 182, 200, 259, 261, 345, 372, 438, 462).

#### FAMILY BALANIDAE Leach, 1817

Balanidae Leach, 1817: 68. — Gray, 1825: 104. — Darwin, 1854: 33 (part.). — Nilsson-Cantell, 1921: 306. — Newman & Ross, 1976: 59. — Buckeridge, 1983: 103. — Newman, 1996: 503.

#### SUBFAMILY AMPHIBALANINAE Pitombo, 2004

Amphibalaninae Pitombo, 2004: 263.

##### Genus *Amphibalanus* Pitombo, 2004

*Amphibalanus* Pitombo, 2004: 263.

Type species *Balanus amphitrite* Darwin, 1854: 240 (part.), pl. 5 figs. 2a–d, i–k, m–o.; type locality Natal, South Africa.

##### *Amphibalanus amphitrite* (Darwin, 1854) ■

*Balanus amphitrite* Darwin, 1854: 240 (part.), pl. 5. figs. 2a–d, i–k, m–o. — Zevina et al., 1992: 89, fig. 61. — Puspasari et al., 2001b: 7.

*Balanus amphitrite* var. (1) *communis* Darwin, 1854: 240, pl. 5 fig. 2e, h, l.

*Balanus amphitrite communis*. — Nilsson-Cantell, 1921: 311, fig. 64. *Balanus amphitrite* forma *hawaiiensis* Broch, 1922: 314, fig. 56 (part.).

*Balanus amphitrite* forma *denticulata* Broch, 1927b: 133, fig. 14 (part.).

*Balanus amphitrite hawaiiensis*. — Hiro, 1937c: 432, figs. 20, 21. *Balanus amphitrite cochinchinensis* Nilsson-Cantell, 1938b: 43, fig. 11a–e.

*Balanus amphitrite* var. *fluminensis* Oliveira, 1941: 21, pl. 4 fig. 4, pl. 5 figs. 1, 2, pl. 8 figs. 1–5.

*Balanus amphitrite* var. *aeratus* Oliveira, 1941: 22, pl. 4 fig. 5, pl. 9 figs. 1–4.

*Balanus amphitrite herzi* Rogers, 1949: 8, pl. 1 figs. 6, 12–15.

*Balanus amphitrite franciscanus* Rogers, 1949: 9, pl. 1 figs. 5, 7, 16–19.

*Balanus amphitrite* var. *columnarius* Tarasov & Zevina, 1957: 179, 184, fig. 68 a–e.

*Balanus amphitrite denticulata* Henry, 1959: 192, pl. 1 fig. 5, pl. 3 fig. 7, upper row right.

*Balanus amphitrite amphitrite*. — Harding, 1962: 274, pl. 1a–g, pl. 2a–k. — Dong et al., 1982: 90, fig. A–E. — Rosell, 1981: 302.

*Balanus amphitrite* var. *hawaiiensis*. — Stubbings, 1963b: 15.

*Amphibalanus amphitrite*. — Pitombo, 2004: 263, 274, figs. 2A, B, 7A, B, 8C.

non *Lepas communis* Pulteney, 1799: 25 (= *Perforatus perforatus perforatus* Bruguière, 1789: 167).

**Distribution.** Cosmopolitan in tropical and subtropical waters: Bermuda & SE USA to Brazil; Cosmopolitan in warm and temperate seas; England & W Europe to S coast of Africa Red, Black and Mediterranean Seas; Suez Canal; SE Africa; Indian Ocean; Australia; Indonesia; **Singapore**; Malaysia; Réam (Cambodia); Gulf of Siam; Vietnam; Condor Is; Tang Trien (South Annam); Cauda Nhatrang; Hongay, Tonkin; S China Sea; Hong Kong; China; Bohai Sea; Taiwan; Philippines; Japan; S Honsyu, Kyusyu & Ryukyu Is; Vladivostok; Hawaii; central California to SW Mexico; fouling species; lower littoral to sublittoral.

**Remarks.** Presumptive subspecies names were given to various *Amphibalanus amphitrite* populations by Darwin (1854) and preceding workers. The revisionary work of Henry & McLaughlin (1975), based on morphological differences, recognised only two sub-species, *A. amphitrite saltonensis* and *A. amphitrite amphitrite*. Later genetic, morphological and experimental work by Flowerdew (1985), Van Syoc (1992) and Raimondi (1992) determined that *saltonensis* was not a distinct clade and thus *A. amphitrite* was considered to be a single, global species. Using genetic and morphological differentiation in *A. amphitrite* from 25 world localities, Chen et al. (2014, revealed three clades, including an Indo-Malay clade in waters around Malaysia and **Singapore**, but there were no diagnostic morphological differences between the clades.

(34, 39, 43, 44, 46, 54, 88, 92, 94, 95, 96, 111, 112a, 113b, 138, 139, 156, 182, 184, 203, 204, 205, 206, 207, 211, 212, 213, 230, 232, 234, 291, 302, 324, 345, 346, 347, 357, 364, 379, 396, 406, 417, 433, 434, 450, 451, 453, 478, 497, 499, 501, 505, 512, 520, 522, 527, 528, 532, 535, 537, 542, 565, 569, 575, 576, 596, 597); (169b, 182, 193, 194, 365, as *Balanus amphitrite communis*); (372, as *Balanus amphitrite hawaiiensis*); (439, as *B. amphitrite saltonensis*, as *B. amphitrite herzi*, as *B. amphitrite franciscanus*); (449, as *Balanus (Balanus) amphitrite amphitrite*); (495, part.); (496, as *amphitrite* var. *variegatus*); (Wu, 1975; Zevina et al., 1992; Leung & Jones, 2000; Puspasari et al., 2001; Pitombo, 2004; Liu & Ren, 2007; Poltarukha & Dautova, 2007; Poltarukha & Zvyagintsev, 2008; Chan, Prabowo & Lee, 2009b; Chen et al. (2014), Shen et al., 2015a). (**Singapore**, S. Teo, pers. comm.)

#### *Amphibalanus cirratus* (Darwin, 1854)\* ■

*Balanus amphitrite* var. (9) *cirratus* Darwin, 1854: 241, pl. 5 fig. 2b.  
*Balanus amphitrite* var. *variegatus*. — Karande & Palekar, 1966: 143, figs. 3, 4, pl. 1 fig. 3, pl. 4 row 1.  
*Balanus carenatus* Gruvel, 1907b: 6, pl. 2 figs. 1–6.  
*Balanus amphitrite cirratus*. — Nilsson-Cantell, 1921: 316, fig. 65a–e.  
*Balanus cirratus*. — Dong et al., 1982: 92, fig. A–C.  
*Amphibalanus cirratus*. — Pitombo, 2004: 274.  
*Balanus amphitrite variegatus*. — Nilsson-Cantell, 1934a: 60, fig. 65a–e.  
*Balanus amphitrite rafflesi* Nilsson-Cantell, 1934a: 64, figs. 5a, b, 6a–e, pl. 5.  
*Balanus amphitrite venustus* Nilsson-Cantell, 1938b: 37, fig. 8a, b (part., see Henry & McLaughlin, 1975: 173).

*Balanus amphitrite vladivostokensis* Tarasov & Zevina, 1957: 179, 184, fig. 67a, b.  
*Balanus variegatus*. — Henry & McLaughlin, 1975: 78, fig. 17, pls. 6, 7 (non *B. variegatus* Darwin).  
*Balanus variegatus* var. *cirratus*. — Harding, 1962: 293, pl. 10 figs. 1–n.  
*Balanus variegatus cirratus*. — Utinomi & Kikuchi, 1966: 6. — Rosell, 1981: 302.  
*Balanus variegatus variegatus*. — Utinomi, 1968b: 171 (non *B. variegatus* Darwin).  
*Balanus cirratus*. — Jones et al., 1990: 18.  
*Amphibalanus cirratus*. — Pitombo, 2004: 274.  
Non *Balanus amphitrite* var. *cirratus* Pope, 1945: 362, pl. 28 fig. 6, pl. 29 fig. 6, pl. 30 figs. 13, 14 (= *B. variegatus* Darwin, 1854).  
Non *Balanus amphitrite cirratus*. — Skerman, 1960: 610, figs. 1, 3 (= *B. variegatus* Darwin).  
Non *Balanus variegatus* var. *cirratus*. — Pope, 1966: 179 (= *B. variegatus* Darwin).

**Distribution.** Indo-west Pacific: India; Australia; Indonesia; Sunda Islands; Malay Arch.; **Singapore**; S Vietnam (Nhatrang Bay, Cua Bê); Hong Kong; S China Sea; China; Philippines; Taiwan; Japan; S Honsyu, Kyusyu, Ryukyu Is; Korea; fouling.

(53, 90, 94, 95, 96, 104, 127, 128, 138, 184, 193, 205, 211, 213, 230, 232, 234, 270, 272, 275, 277, 297, 310, 345, 361, 411, 434, 444, 475, 537, 539, 542, 557, 569, 594, 597); (88, as *Balanus amphitrite* var. 9 *cirratus*); (113b, 192, 347, 357, 363, 364, 372, 512, 528, 532, as *Balanus amphitrite cirratus*); (449, as *Balanus (Balanus) variegatus cirratus*); (496, as *Balanus amphitrite* var. *cirratus*); (505, ? as *Balanus amphitrite vladivostokensis*) (Leung & Jones, 2000; Pitombo, 2004). (**Singapore**, S. Teo, pers. comm.)

#### *Amphibalanus eburneus* (Gould, 1841)

*Balanus eburneus* Gould, 1841: 15, pl. 1 fig. 6. — Dong et al., 1982: 90, fig. — Puspasari et al., 2001b.  
*B.[alanus] democraticus* De Kay, 1844: 252.  
*Balanus amphitrite* var. *niveus*. — Oliviera, 1941: 19, pl. 3 figs. 3–6, pl. 4 figs. 2, 7 (part., non *B. amphitrite* var. *niveus* Darwin, 1854: 240).  
*Amphibalanus eburneus*. — Pitombo, 2004: 274, fig. 4B.

**Distribution.** Endemic to W Atlantic; introduced to Europe, Mediterranean; Indian Ocean; China; Bohai Sea; Japan; Hawaii and other islands of Pacific Oceania; fouling species.

(81, 88, 95, 96, 116a, 128, 152, 202, 205, 259, 332, 345, 347, 357, 372, 403, 404, 434, 478, 505, 524, 531, 537); (De Kay, 1844; Puspasari et al., 2001b; Pitombo, 2004; Liu & Ren, 2007)

#### *Amphibalanus improvisus* (Darwin, 1854)\*

*Balanus improvisus* Darwin, 1854: 250, pl. 6 figs. 1a–c. — Dong et al., 1982: 89, fig. — Puspasari et al., 2001b. — Zevina et al., 1992: 86, fig. 59.  
*Balanus improvisus* var. *assimilis* Darwin, 1854: 250.  
*Balanus improvisus* var. *gryphicus* Münter, 1868: 9.  
? *B. amphitrite vladivostokensis* Tarasov & Zevina, 1957: 184 fig. 67.  
*Amphibalanus improvisus*. — Pitombo, 2004: 274.

**Distribution.** E coast of the Americas; N Atlantic; W coast of Africa to C of Good Hope; Mediterranean; Black Sea; Red Sea; NW coast of USA.; Ecuador; Australia; Strait of Malacca; **Singapore**; Vietnam; China; Bohai Sea; Japan; fouling;

(40, 88, 95, 96, 128, 148, 152, 202, 205, 248, 259, 345, 347, 350, 357, 403, 434, 478, 505, 531, 534, 537); (Zevina et al., 1992; Puspasari et al., 2001b; Pitombo, 2004; Liu & Ren, 2007; Poltarukha & Zvyagintsev, 2008).

***Amphibalanus poecilotheca* (Krüger, 1911)\* ■**

*Balanus poecilotheca* Krüger, 1911a: 48, figs. 95–97, pl. 1 figs. 2c–e, pl. 3 fig. 32a–e. — Dong et al., 1982: 93, fig. A–C. — Zevina et al., 1992: 96, fig. 65.

*Balanus amphitrite* var. *malayensis* Hoek, 1913: 172, pl. XIV figs. 8, 9, 10a–d, 11a, b, 12–15, 17.

*Balanus alatus* Hoek, 1913: 175, pl. XV figs. 1, 2a–d, 3–8.

*Balanus minutus* Hoek, 1913: 177, pl. 15 figs. 9, 10a–c, 11–16.

*Balanus amphitrite* forma *communis* Broch, 1922: 314 (part.).

*Balanus* (*Eubalanus*) *amphitrite* forma *poecilosculpta* Broch, 1931: 59, fig. 21.

*Balanus amphitrite poecilosculpta*. — Nilsson-Cantell, 1934a: 61, figs. 3, 4, pl. 5 fig. 4.

*Balanus amphitrite poecilotheca*. — Hiro, 1937c: 435, figs. 22, 23. *Amphibalanus poecilotheca*. — Pitombo, 2004: 274.

**Distribution.** Indo-west Pacific: SW Africa; SW Australia; Indonesia; **Singapore**; Malay Arch.; Vietnam; Hong Kong; China; Taiwan; Sulu Arch.; Philippines; S Japan; Bonin Is; fouling species; sublittoral; attached to antopatharians; 26–146 m.

(27, 39, 44, 95, 96, 156, 184, 193, 205, 279, 280, 345, 403, 434, 512, 522, 528, 539); (44, as *Balanus amphitrite* forma *poecilotheca*); (182, 193, 505, as *Balanus amphitrite poecilotheca*); (364, as *Balanus amphitrite poecilosculpta*); (39, 200, 345, 534, as *Balanus minutus*); (Zevina et al., 1992; Leung & Jones, 2000; Pitombo, 2004; Liu & Ren, 2007; Poltarukha & Zvyagintsev, 2008; Chan, Prabowo & Lee, 2009b). (**Singapore**, S. Teo, pers. comm.)

***Amphibalanus reticulatus* (Utinomi, 1967) ■**

*Balanus amphitrite* var. (1) *communis* Darwin, 1854: 240, pl. 5 fig. 2e, h, l (part.).

*Balanus amphitrite* forma *communis*. — Broch, 1922: 314 (part.).

*Balanus amphitrite* forma *hawaiiensis* Broch, 1922: 314 (part.).

*Balanus amphitrite communis*. — Hiro, 1938a: 301, fig. 1a, b.

*Balanus amphitrite cirratus*. — Zevina & Tarasov, 1963: 89, fig. 10a–e.

*Balanus amphitrite* var. *variegatus*. — Stubbings, 1963a: 329, fig. 2a–e.

*Balanus amphitrite* variety. — Southward & Crisp, 1963: 43, fig. 23.

*Balanus amphitrite tessellatus* Utinomi, 1964: 52, pl. 26 fig. 11.

*Balanus amphitrite* var. *denticulata*. — Karande & Palekar, 1966: 145, fig. 7, pl. 1 fig. 7, pl. 4 row 5 (part.).

*Balanus variegatus tessellatus* Utinomi & Kikuchi, 1966: 5.

*Balanus amphitrite amphitrite*. — Stubbings, 1967: 271, fig. 14d–f (part.).

*Balanus reticulatus*. — Utinomi, 1967: 216, figs. 9a, b, 10a, b, 11a–e, pl. 6 figs. 7, 8 (part.) — Dong et al., 1982: 91, fig. A–C. — Zevina et al., 1992: 92, fig. 63. — Puspasari et al., 2001b. *Amphibalanus reticulatus*. — Pitombo, 2004: 274.

**Distribution.** Cosmopolitan in tropical and subtropical waters: USA (SE) to W Indies; Mediterranean Sea; Indian Ocean; SE Africa; Australia; **Singapore**; Malaysia; Gulf of Thailand; Vietnam; Hong Kong; China, Yellow Sea, S China Sea; Taiwan; Japan; Pacific Ocean; Hawaii; on intertidal rocks in sheltered bays, fouling species; littoral.

(52, 55, 94, 95, 96, 113b, 154, 156, 203, 205, 207, 211, 212, 213, 230, 232, 234, 273, 300, 345, 426, 434, 477, 494, 532, 537, 542, 569, 570, 571, 572, 573, 574, 575, 576, 596, 597); (39, as *Balanus amphitrite* forma *communis*); (44, 184, 253, 520, 527, 529, 536, as *Balanus amphitrite communis*); (88 (part.), 200, as *Balanus amphitrite* var. (1) *communis*); (310, as *Balanus amphitrite tessellatus*); (444, as *Balanus amphitrite amphitrite*); (478, as *Balanus amphitrite amphitrite* var.); (539, as *Balanus amphitrite tessellatus* nom. nov.); (Zevina et al., 1992; Leung & Jones, 2000; Puspasari et al., 2001b; Pitombo, 2004; Liu & Ren, 2007; Poltarukha & Dautova, 2007; Poltarukha & Zvyagintsev, 2008; Chan, Prabowo & Lee, 2009b). (**Singapore**, S. Teo, pers. comm.)

***Amphibalanus rhizophorae* (Ren & Liu, 1978)**

*Balanus littoralis* Ren & Liu, 1978: 148, 192, figs. 16, 17, pl. V figs. 7–17. — Dong et al., 1982: 93, fig.

*Balanus rhizophorae* Ren & Liu, 1989: 181, fig. 17.

*Amphibalanus rhizophorae*. — Pitombo, 2004: 274.

**Distribution.** Indian Ocean; S China Sea; China: Zhanjiang, Guangdong Province; Donghaidao & Ya-xian, Guangdong Province; Chi-Sha, Guangxi Zhuang Autonomous Region; fouling species, attached to cement piles, mangrove trees; littoral.

**Remarks.** Ren (1989) proposed *Balanus rhizophorae* nom. nov. for *Balanus littoralis* Ren & Liu, 1978, which was pre-occupied by *Balanus amphitrite littoralis* Kolosváry (1948: 106).

(433); (434, as *Balanus littoralis*); (95, 205); (Pitombo, 2004; Liu & Ren, 2007).

***Amphibalanus variegatus variegatus* (Darwin, 1854) ■**

*Balanus amphitrite* var. (8) *variegatus* Darwin, 1854: 241.

*Balanus amphitrite* var. *stutsburi* Krüger, 1914: 437.

*Balanus concavus sinensis* Broch, 1931: 63, fig. 23.

*Balanus amphitrite rafflesia* Nilsson-Cantell, 1934a: 64.

*Balanus amphitrite* var. *cirratus*. — Pope, 1945: 362, pl. 28 fig. 6, pl. 29 fig. 6, pl. 30 figs. 13, 14.

*Balanus amphitrite cirratus*. — Skerman, 1960: 610, figs. 1, 3 (non *Balanus amphitrite cirratus* Darwin, 1854).

*Balanus variegatus*. — Harding, 1962: 291, pl. 10 figs. a–k. — Zevina et al., 1992: 92, fig. 64.

*Balanus variegatus* var. *cirratus*. — Pope, 1966: 179.

*Balanus amphitrite*. — Foster, 1967: 83 (part.).

*Balanus kondakovi*. — Henry & McLaughlin, 1975: 78 (part., New Zealand specimens; non *B. kondakovi* Tarasov & Zevina, 1957).  
*Balanus variegatus variegatus*. — Foster, 1979: 111, fig. 67, pl. 14b.  
*Balanus cirratus*. — Ren & Liu, 1978: 145, figs. 14, 15 (1–13), pl. 4 figs. 15–20, pl. 5 figs. 1–6.

*Amphibalanus variegatus*. — Pitombo, 2004: 274.  
 Non *Balanus amphitrite variegatus*. — Nilsson-Cantell, 1934a: 60.  
 Non *Balanus variegatus*. — Henry & McLaughlin, 1975: 78, fig. 17, pls. 6, 7 (= *B. cirratus*).  
 Non *Balanus variegatus*. — Utinomi, 1968b: 171 (= *B. cirratus*).

**Distribution.** Indo-west Pacific: Bay of Bengal; Sumatra; New Zealand, Australia; Indonesia; **Singapore**; Vietnam; Gulf of Siam; Hong Kong; W Kyushu; Vladivostok; fouling.

(33, 38, 44, 79, 80, 81, 82, 83, 128, 131, 138, 156, 200, 215, 230, 232, 234, 244, 321, 345, 364, 365, 367, 372, 496, 505, 552); (88, as *Balanus amphitrite* var. 8, *variegatus*); (111, as *Balanus amphitrite malayensis*); (240, larval comparison with *Balanus amphitrite*); (411, as *Balanus amphitrite cirratus*); (534, includes *Balanus amphitrite malayensis* Hoek, 1913: 172); (364, as *Balanus rafflesia*) (Wu, 1975; Leung & Jones, 2000; Pitombo, 2004). (as *Balanus variegatus* Zevina et al., 1992; Poltarukha & Dautova, 2007); (**Singapore**, as *Balanus rafflesia*, S. Teo, pers. comm.)

#### *Amphibalanus zhujiangensis* (Ren, 1989)

*Balanus zhujiangensis* Ren, 1989a: 467, fig. 2 (1–14).  
*Amphibalanus zhujiangensis*. — Pitombo, 2004: 274. — Puspasari et al., 2002: 235, figs. 1A–G, 2A–H.

**Distribution.** S China Sea; Taiwan; Japan; fouling species; open waters.

(205, 432); (Puspasari et al., 2002; Pitombo, 2004; Liu & Ren, 2007; Chan, Prabowo & Lee, 2009b).

#### Genus *Fistulobalanus* Zullo, 1984

*Balanus* da Costa, 1778: 248 (part.).  
*Balanus pallidus* Darwin group Henry & McLaughlin, 1975: 27, 28.  
*Fistulobalanus* Zullo, 1984: 1330. — Pitombo, 2004: 264, 275.

Type species *Balanus amphitrite* var. *pallidus* Darwin, 1854: 240, pl. fig. 2c (part., non pl. 5 fig. 2k); type locality unknown.

#### *Fistulobalanus albicostatus* (Pilsbry, 1916)

*Balanus amphitrite* var. *communis* Krüger, 1911a: 51, pl. 1 fig. 7, pl. 4 fig. 4a<sup>1</sup>–b<sup>2</sup> [as 34 in text].  
 ?*Balanus mirabilis* Krüger, 1912: 11, pl. 2 fig. 6.  
*Balanus amphitrite albicostatus* Pilsbry, 1916: 90, fig. 18, pl. 20 figs. 1–4.  
*Balanus amphitrite* forma *formosanus* Hiro, 1938a: 306, figs. 6a–h, 7a–c.  
*Balanus albicostatus albicostatus*. — Utinomi & Kikuchi, 1966: 5.  
*Balanus albicostatus formosanus*. — Utinomi, 1967: 212, figs. 6a–c, 7a–d, pl. 6 fig. 3.  
*Balanus albicostatus*. — Henry & McLaughlin, 1975: 108, figs. 20, 22a, pl. 10 figs. h–k, pl. 11 figs. m, n. — Dong et al., 1982: 91, fig. A–C. — Zevina et al., 1992: 89, fig. 62.

*Fistulobalanus albicostatus*. — Zullo, 1984: 1330. — Puspasari et al., 2001b. — Pitombo, 2004: 275.

**Distribution.** Australia; Vietnam; Hong Kong; S China Sea; China, Taiwan, Japan, S Honsyu, Kyusyu & Ryukyu Is; Korea; California; rocks, mangrove trunks; fouling species; littoral (estuarine areas).

(94, 95, 96, 104, 113b, 128, 156, 160, 161, 184, 186, 189, 193, 203, 205, 211, 214, 217, 230, 232, 234, 245, 250, 259, 267, 271, 272, 275, 276, 277, 310, 311, 312, 345, 347, 371, 376, 380, 426, 434, 501, 505, 512, 518, 522, 523, 528, 532, 536, 537, 539, 575, 576, 594); (182, 184, 192, 194, 279, 403, as *Balanus amphitrite albicostatus*); (127, as *Balanus violaceus*); (184, as *Balanus amphitrite formosanus*); (532, as *Balanus albicostatus albicostatus*); (Wu, 1975; Leung & Jones, 2000; Puspasari et al., 2001b; Pitombo, 2004; Chan & Leung, 2007; Liu & Ren, 2007; Poltarukha & Zvyagintsev, 2008; Chan, Prabowo & Lee, 2009b).

#### *Fistulobalanus kondakovi* (Tarasov & Zevina, 1957)

*Balanus amphitrite* var. *niveus* Krüger, 1911a: 51, figs. 102–104, pl. 4 fig. 35a–b2 (non *B. amphitrite* var. *niveus* Darwin, 1854: 240).  
*Balanus amphitrite* var. *stutsburi* Krüger, 1914: 437.  
*Balanus amphitrite albicostatus* Pilsbry, 1916: 90 (part.; non fig. 18 a, b, pl. 20 figs. 1–4).  
*Balanus amphitrite krügeri* Nilsson-Cantell, 1932a: 24, fig. 10 a–g, pl. 1 figs. 5–7.  
*Balanus amphitrite* var. *kondaovi* Tarasov & Zevina, 1957: 179, 191, fig. 76 a–d  
*Balanus amphitrite* var. *insignis*. — Karende & Palekar, 1966: 145, figs. 10–12, pl. 2 fig. 8, pl. 4 row 6 (non *Balanus amphitrite* var. *insignis* Nilsson-Cantell, 1938b: 41).  
*Balanus pallidus krügeri* Utinomi, 1966: 38.  
*Balanus amphitrite kondaovi* Newman & Ross, 1976: 63.  
*Balanus uliginosus* Utinomi, 1967: 202, figs. 1a–c, 2a–e, pl. 6 figs. 4–6.  
*Balanus cirratus*. — Dong et al., 1982: 92, fig. A–C.  
*Balanus kondakovi*. — Henry & McLaughlin, 1975: 114, figs. 21, 22b, c, f, pl. 11 figs. a–m. — Zevina et al., 1992: 87, fig. 60. — Puspasari et al., 2001b.  
*Fistulobalanus kondakovi*. — Zullo, 1984: 1330. — Pitombo, 2004: 275.

**Distribution.** Indo-west Pacific: India; Sumatra; Australia (SW); mainland coast of SE Asia; Vietnam; Gulf of Thailand; Vietnam; Hong Kong; S China Sea; China; Taiwan; Yellow Sea; Bohai Sea; Japan; S Honsyu, Kyusyu, Ryukyu Is; southern Korea; New Zealand; estuarine coastal areas, attached to rocks; fouling species; littoral.

(95, 96, 154, 156, 184, 193, 204, 205, 208, 209, 210, 241, 244, 279, 297, 310, 311, 313, 345, 416, 417, 434, 444, 532, 536, 537, 568, 575, 576, 594); (505, as *Balanus amphitrite kondakovi*); (184, 193, 359, 444, 505, 512, 520, 528; 594, as *Balanus amphitrite krügeri*); (192, as *Balanus amphitrite krügeri*); (251, 532, 537, as ? *Balanus uliginosus*); (372, as *Balanus pallidus krügeri*); (403, (part.) as *Balanus amphitrite albicostatus*); (*Balanus uliginosus* Utinomi, 1967: 202); (279, as *Balanus amphitrite niveus*); (539, as *Balanus amphitrite tessellatus* nom. nov.); (Leung & Jones, 2000 ( as *Balanus*

*uliginosus*); Puspasari et al., 2001b; Pitombo, 2004; Liu & Ren, 2007; Poltarukha & Zvyagintsev, 2008; Chan, Prabowo & Lee, 2009b).

***Fistulobalanus pallidus* (Darwin, 1854)**

*Balanus amphitrite* var. *pallidus* Darwin, 1854: 240, pl. fig. 2c (part.; non pl. 5 fig. 2 k).  
*Balanus amphitrite* var. *stutsburi* Darwin, 1854: 240, pl. 5 fig. 2d, i, m–o.  
*Balanus dybowskii* Gruvel, 1903: 24.  
*Balanus amphitrite venustus* Nilsson-Cantell, 1925: 28, fig. 11a–h, pl. 1 fig. 3.  
*Balanus amphitrite stutsburi*. — Nilsson-Cantell, 1932f: 111, 125, fig. 5a–e.  
 ? *Balanus amphitrite insignis* Nilsson-Cantell, 1938b: 41, fig. 10a–h, pl. 1 fig. 1.  
*Balanus pallidus stutsburi*. — Harding, 1962: 281: pl. 4, fig. a–h.  
*Balanus pallidus*. — Stubbings, 1964b: 338, fig. 4 a–d.  
*Balanus amphitrite* var. *venustus* Karande & Palekar, 1966: 145, fig. 13, pl. 2 fig. 9, pl. 4 row 7.  
*Fistulobalanus pallidus*. — Pitombo, 2004: 275.  
 Non *Balanus amphitrite* var. *stutsburi*. — Krüger, 1927: 13, 16 (= *B. kondakovi*).  
 Non *Balanus amphitrite pallidus*. — Nilsson-Cantell, 1932f: 111, 124, fig. 4a, b (= ?*B. subalbidus*).

**Distribution.** W Indies to N coast of S America; Panama Canal; W Africa from Morocco to mouth of Congo; Mediterranean Sea; Indo-west Pacific: Zanzibar; Bombay, India; ?Sumatra; Australia; Java Sea; Straits of Malacca to Hong Kong, Philippine Arch. Known with certainty from W Africa and W coast of India.

(24, 88, 156, 202, 230, 232, 234, 345, 348, 372, 497, 532); (Leung & Jones, 2000; Pitombo, 2004).

***Fistulobalanus patelliformis* (Bruguière, 1789)**

*Balanus patelliformis* Bruguière, 1789–1792: 60–67, 158–173, pls. 164–166. — Puspari et al., 2000: 2, figs. 1A–J, 2 (1a–d, 2a–c), 3A–L.  
*Lepas patellaris*. — Gmelin, 1790: 3213.  
*Balanus patellaris*. — Darwin, 1854: 259, pl. VI, fig. 5a–c.  
*Fistulobalanus patelliformis*. — Pitombo, 2004: 275.

**Distribution.** SW coast of India to Straits of Malacca; Java Sea, Malay Arch. to Philippine Arch.

(6, 56, 61, 88, 127, 128, 200, 345, 351, 347, 372, 534, 547) (156, as *Balanus patelliformis*); (Wu, 1975; Puspari et al., 2000; Pitombo, 2004).

***Fistulobalanus sumbawaensis* Prabowo & Yamaguchi, 2005**

*Fistulobalanus sumbawaensis* Prabowo & Yamaguchi, 2005: 929, fig. 1A–H, fig. 2A–P, fig. 3A–H, a–h, fig. 4.

**Distribution.** Sumbawa I., Indonesia.

(Prabowo & Yamaguchi, 2005).

**SUBFAMILY BALANINAE Leach, 1817**

Balaninae Leach, 1817: 68.

**Genus *Balanus* da Costa, 1778**

*Balanus* da Costa, 1778: 667.

Type species *Balanus balanus* (Linnaeus, 1758: 667); type locality unknown.

**Group of *Balanus trigonus***

***Balanus pulchellus* Ren, 1989**

*Balanus pulchellus* Ren, 1989a: 468, fig. 3 (1–17). — Pitombo, 2004: 274.

**Distribution.** Australia; China; S China Sea; fouling species.

(205, 432) (Pitombo, 2004; Liu & Ren, 2007).

***Balanus trigonus* Darwin, 1854**

*Balanus trigonus* Darwin, 1854: 223, pl. 3 fig. 7a–f. — Dong et al., 1982: 94, fig. A–C. — Pitombo, 2004: 274. — Zevina et al., 1992: 85, fig. 58.

*Balanus armatus* Müller, 1867: 329, pl. 7 figs. 1–21, 13–28, pl. 8 figs. 44, 46–48, pl. 9 fig. 5b.

*Balanus porcatus*. — Jennings, 1918: 61 (part.).

*Balanus (Balanus) trigonus*. — Withers, 1924: 33. — Foster, 1979: 113, fig. 68, pl. 14 c.

**Distribution.** Cosmopolitan in tropical and warm temperate seas; Indian Ocean; Red Sea; Australia; New Zealand; Vietnam; S China Sea; Hong Kong; China; Taiwan; Japan; Pacific Ocean; W coast of Americas; Atlantic Ocean; 3–120 m, fouling.

(27, 44, 46, 88, 94, 95, 96, 112a, 113b, 132, 165, 182, 194, 203, 205, 206, 208, 211, 212, 213, 230, 232, 233, 234, 255, 259, 279, 321, 345, 347, 350, 379, 434, 453, 495, 498, 499, 501, 505, 512, 522, 534, 535, 537, 539, 542, 554, 569, 597); (128, as *Balanus armatus*); (403, includes *Balanus armatus* Müller, 1868: 393); (Zevina et al., 1992; Leung & Jones, 2000; Pitombo, 2004; Liu & Ren, 2007; Poltarukha & Dautova, 2007; Poltarukha & Zvyagintsev, 2008; Chan, Prabowo & Lee, 2009b).

**SUBFAMILY MEGABALANINAE Newman, 1979**

**Megabalaninae Newman, 1979a: 279.**

**Genus *Megabalanus* Hoek, 1913**

*Balanus*, Section A (part.) Darwin, 1854: 194.

*Balanus*, Sectio *Mega-balanus* Hoek, 1913: 158, 164.

*Balanus (Megabalanus)*. — Pilsbry, 1916: 51.

*Megabalanus*. — Newman & Ross, 1976: 67.

Type species *Lepas tintinnabulum* Linnaeus, 1758: 668, by monotypy; lectotype locality Amboina, Indonesia.



**Megabalanus ajax (Darwin, 1854)**

*Balanus tintinnabulum* Chenu, 1843 (part.): pl. 2 fig. 8 [non *Balanus tintinnabulum* (Linnaeus, 1758)]  
*Balanus ajax* Darwin, 1854 (part.): 214, pl. 3 fig. 1a–d.  
*Megabalanus ajax*. — Newman & Ross, 1976: 67. — Henry & McLaughlin, 1986: 49, figs. 4l, 13a–d. — Pitombo, 2004: 275.

**Distribution.** Indo-west Pacific: Indian Ocean; Maldives, Seychelles and Chagos Is; Australia (N); Vietnam; Philippines; Taiwan; Japan; Solomon Is; New Caledonia; Pacific Ocean; attached to coral *Millipora complanata* Lamarck, 1816.

(88 (part.), 108, 127, 128, 130, 134, 135, 157, 200, 234, 235, 268, 269, 284, 345, 403 (part.)); (372, as *Balanus ajax*); (Pitombo, 2004; Poltarukha & Dautova, 2007; Poltarukha & Zvyagintsev, 2008; Chan, Prabowo & Lee, 2009b; Shen et al. (2016b)).

**Megabalanus crispatus (Schröter, 1786)**

*Lepas crispata* (var.) Schröter, 1786: 534, pl. 9 fig. 21.  
 ?*Lepas crispata*. — Wood, 1815: 51, pl. 8 figs. 1–4.  
*Balanus tintinnabulum* var.(5) *crispatus*. — Darwin, 1854: 195 (part.), non pl. 1 fig. h (= *M. volcano* (Pilsbry, 1916)).  
*Balanus tintinnabulum crispatus*. — Dong et al., 1982: 87, fig.  
*Megabalanus crispatus*. — Newman & Ross, 1976: 67. — Henry & McLaughlin, 1986: 28, figs. 3j, 8a–d. — Pitombo, 2004: 275.

**Distribution.** La Rochelle, Senegal; East Indies; China; fouling species.

**Remarks.** Henry & McLaughlin (1986: 29) designated the lectotype and commented that the type locality and the distribution of this species is unknown.

(30, 95, 127, 157, 345, 403, 501); (469, as *Lepas crispata*); (88, as *Balanus tintinnabulum* var. *crispatus*); (96, 205, as *Balanus tintinnabulum crispatus*); (Pitombo, 2004).

**Megabalanus occator (Darwin, 1854)**

*Balanus tintinnabulum* Spengler, 1790: 180 [not *Balanus tintinnabulum* (Linnaeus, 1758)]  
*Balanus tintinnabulum* var. *occator* Darwin, 1854: 196, pl. 1 fig. k, pl. 2 fig. 1b.  
*Balanus tintinnabulum occator*. — Pilsbry, 1916: 59, pl. 11 fig. 1–1e. — Dong et al., 1982: 87, fig. AC.  
*Megabalanus occator*. — Henry & McLaughlin, 1986: 33, figs. 2 d, 3n–o, 9a–d. — Newman & Ross, 1976: 68. — Zevina et al., 1992: 99, fig. 68. — Pitombo, 2004: 275.  
*Balanus (Megabalanus) xishaensis*. — Ren & Liu, 1978: 123, 191, fig. 2, pl. II figs. 1–9.  
*Balanus xishaensis*. — Dong et al., 1982: 89, fig.  
 Non *Balanus tintinnabulum occator*. — Zevina & Tarasov, 1963: 88, fig. 9a, b, v (= *M. volcano* Pilsbry, 1916).

**Distribution.** Indo-west Pacific: Indian Ocean; Australia; Indonesia; Vietnam; Xisha Is., S China Sea; E China Sea; China; Taiwan?; Philippines (Mindanao); Bonin I.; Fiji Is; on rocks, coral reefs, fouling species of ships, floating structures, etc.; littoral (low rocky shores).

**Remarks.** Chan, Prabowo & Lee (2009b: 268) suggest that previous records of *M. occator* in Taiwan are *M. volcano*.

(35, 108, 111, 128, 157, 259, 284, 345, 377, 512, 546b, 547); (88, as *Balanus occator*); (95, as *Balanus (Megabalanus) occator*); (95, 205, 434, as *Balanus (Megabalanus) xishaensis*); (96, 193, 205, 263, 372, 403, 516, as *Balanus tintinnabulum occator*); (Zevina et al., 1992; Pitombo, 2004; Liu & Ren, 2007; Poltarukha & Zvyagintsev, 2008; Chan, Prabowo & Lee, 2009b).

**Megabalanus rosa (Pilsbry, 1916)**

*Balanus (Megabalanus) tintinnabulum rosa* Pilsbry, 1916: 61. — Henry & McLaughlin, 1986: 37, figs. 4 c, 10 a–d. — Tarasov & Zevina, 1957: 164, frontispiece B, figs. 55, 56.  
*Balanus tintinnabulum rosa*. — Nilsson-Cantell, 1932a: 16, fig. 6, pl. I fig. 3.  
*Balanus (Megabalanus) rosa*. — Yamaguchi, 1973: 130, fig. 10 (1–12), pl. VI figs. 1 a–j, 3, 6, 7, pl. VII figs. 3 a–4 b, pl. VIII figs. 1–2 b.  
*Megabalanus rosa*. — Newman & Ross, 1976: 68. — Henry & McLaughlin, 1986: 37, figs. 4 c, 10 a–d. — Zevina et al., 1992: 101, fig. 69. — Pitombo, 2004: 275.  
*Balanus rosa*. — Dong et al., 1982: 88, fig. A–D.

**Distribution.** Australia (N); Vietnam; China; Taiwan; Japan; S Honsyu, Kyusu and Ryuku Is.; on rocks, fouling species of ships, floating structures, etc.; littoral (low rocky shores).

(44, 95, 157, 160, 194, 205, 230, 232, 234, 246, 247, 249, 259, 284, 345, 357, 512, 522, 528); (165, 182, 359, 403, as *Balanus tintinnabulum rosa*); (96, as *Balanus rosa*); (434, 566, as *Balanus (Megabalanus) rosa*); (505, 537, as *Balanus (Megabalanus) tintinnabulum rosa*); (Pitombo, 2004; Liu & Ren, 2007; Poltarukha & Zvyagintsev, 2008; Bielecki et al., 2009; Chan, Prabowo & Lee, 2009b).

**Megabalanus tintinnabulum (Linnaeus, 1758)**

*Balani* Rumphius, 1705: 121, pl. 41 figs. A, C, D.  
*Balanus tintinnabuliformis laevis* Lang, 1772: 4.  
*Balanus cylindraceus unicum thalamum efformans, magnis ventricosus* Gaultierius, 1742: un-numbered page, pl. 106, fig. H.  
*Glands de mer de la grande espèce* Dezallier d'Argenville, 1742: 364, pl. 30 fig. A. — 1757: 364, pl. 26 fig. A.  
*Lepas Tintinnabulum* Linnaeus, 1758: 668. — Chemnitz, 1785 (part.): pl. 97 figs. 830, 831 (non figs. 828, 829).  
*Lepas calyciformis orientalis* Ellis, 1758: 845, pl. 34 figs. 8, 9.  
*Balanus tintinnabulum*. — Bruguière, 1789 (part.): 165. — Holthuis & Heerebout 1972: 24, pl. 1.  
*Lepas tintinnabulum*. — Wood, 1815: 38, pl. 6 figs. 1, 2.  
*Lepas spinosa* Wood, 1815 (part.): pl. 7 fig. 4 (large shell only; small shells = *M. spinosus*).  
*Balanus tintinnabulum* var. (1) *communis* Darwin, 1854: 195, pl. 1 figs. a, b, f supra, pl. 2 figs. 1 a, 1 c–e, 1 i, 1 k.  
*Balanus tintinnabulum* var. *communis*. — Gruvel, 1905a: 211  
*Balanus tintinnabulum tintinnabulum*. — Pilsbry, 1916: 55, fig. 9, pl. 10 figs. 1–1 e. — Dong et al., 1982: 86, fig.  
*Balanus tintinnabulum antillensis* Pilsbry, 1916: 63, pl. 13 figs. 1–2 e.  
*Balanus (Megabalanus) tintinnabulum* forma *communis* Broch, 1931: 56.

*Balanus tintinnabulum* var. *tintinnabulum*. — Oliveira 1941: 11, fig. 1, pl. 2 figs. 1, 2, pl. 4 fig. 1, pl. 5 fig. 3, pl. 8 fig. 6.  
*Megabalanus antillensis* Newman & Ross, 1976: 67.  
*Megabalanus tintinnabulum*. — Newman & Ross, 1976: 68. — Henry & McLaughlin, 1986: 17, figs. 1e, 2a, g, h, 3a–c, 5 a–l. — Zevina et al., 1992: 99, fig. 67. — Pitombo, 2004: 175.  
*Balanus (Megabalanus) tintinnabulum tintinnabulum*. — Ren & Liu, 1978: 121, fig. 1, pl. 1 figs. 1–5.  
 Non *Lepas tintinnabulum*. — Spengler, 1790: 180 [= *Megabalanus occator* (Darwin, 1854)]  
 Non *Lepas Tintinnabulum* var. a. — Spengler, 1790: 181 (*incertae sedis*)  
 Non *Lepas Tintinnabulum* var. b. — Spengler, 1790: 182 [= *Striatobalanus amaryllis* (Darwin, 1854)]  
 Non *Lepas Tintinnabulum*. — Chemnitz, 1785: pl. 97, figs. 828, 829 [= *Austromegabalanus nigrescens* (Lamarck, 1818)].  
 Non *Balanus tintinnabulum*. — Chenu, 1843: pl. 2 fig. 8, pl. 3 fig. 5, pl. 2 fig. 8 = *Megabalanus ?ajax* (Darwin, 1854); pl. 3 fig. 5 [= *Megabalanus tulipiformis* (Darwin, 1854)].  
 Non *Balanus tintinnabulum* var. *communis*. — Krüger, 1911a: 46, pl. 3 figs. 31 a<sub>1</sub>–31 b<sub>2</sub> [= ? *Megabalanus volcano* Pilsbry, 1916)].  
 Non *Balanus (Megabalanus) tintinnabulum*. — Withers, 1924: pl. 6 figs. 4–7 [= ? *Megabalanus linzei* (Foster, 1979)].  
 Non *Balanus tintinnabulum antillensis* Pilsbry, 1927: 38, fig. 3 a–c [= *Megabalanus stultus* (Darwin, 1854)]  
 Non *Balanus tintinnabulum tintinnabulum*. — Linzey, 1942: 279 [= *Megabalanus linzei* (Foster, 1979)].  
 Non *Balanus tintinnabulum*. — Foster, 1967: 81, fig. 2 a, b [= *Megabalanus linzei* (Foster, 1979)].

**Distribution.** Cosmopolitan: W Africa from Mediterranean to Cape of Good Hope; Europe, east Mediterranean; Indo-west Pacific: Madagascar; Arabian Sea; Bay of Bengal; Australia (N); **Singapore**; Thailand; Vietnam; Hong Kong; S China Sea; E China Sea; Taiwan; Japan; New Zealand; Brazil; Venazuela; on rocks, fouling species of ships, floating structures, etc.; littoral (low exposed rocky shores).

(27, 95, 128, 157, 181, 192, 193, 205, 230, 232, 234, 279, 321, 357, 426, 433, 495, 497, 505, 512, 569, 572); (298, as *Lepas Tintinnabulum*); (88, 200, as *Balanus tintinnabulum* var. *communis*); (96, 193, 372, 403, 499, 501, 594, as *Balanus tintinnabulum tintinnabulum*); (345, as *Megabalanus antillensis*); (379, as *Balanus tintinnabulum* var. *tintinnabulum*); (403, as *Balanus tintinnabulum antillensis*); (434, as *Balanus (Megabalanus) tintinnabulum tintinnabulum*); (Zevina et al., 1992; Leung & Jones, 2000; Pitombo, 2004; Liu & Ren, 2007; Poltarukha & Zvyagintsev, 2008; Chan, Prabowo & Lee, 2009b). (**Singapore**, S. Teo, pers. comm.)

#### *Megabalanus validus* (Darwin, 1854)

*Balanus tintinnabulum* var. (3) *validus* Darwin, 1854: 195, pl. 1 figs. c, f infra.  
*Balanus tintinnabulum* var. *validus*. — Hoek, 1913: 164, pl. 13 figs. 16–18, pl. 14 figs. 1–4.  
*Balanus tintinnabulum* forma *valida*. — Broch, 1931: 56.  
*Megabalanus validus*. — Newman & Ross, 1976: 69. — Henry & McLaughlin, 1986: 43, figs. 4 f, 11 a–h. — Pitombo, 2004: 275.

**Distribution.** Australia (SW); Malay Arch.; Taiwan; on rocks, fouling species of ships, floating structures, etc; littoral (low intertidal).

(44,127, 128, 157, 230, 232, 234, 282, 284, 345, 372); (88, 200, as *Balanus tintinnabulum* var. *validus*); (Pitombo, 2004; Liu & Ren, 2007; Chan, Prabowo & Lee, 2009b).

#### *Megabalanus volcano* (Pilsbry, 1916)

*Balanus tintinnabulum* var. *crispatus* Darwin, 1854 (part.): 195, pl. 1 fig. h (non *Lepas crispatus* (var.) Schröter, 1786).  
*Balanus tintinnabulum volcano* Pilsbry, 1916: 60, pl. 11 figs. 2–2e.  
*Balanus tintinnabulum peninsularis*. — Nilsson-Cantell, 1927: 783, fig. 18a, b.  
*Balanus (Megabalanus) tintinnabulum volcano*. — Tarasov & Zevina, 1957: 165.  
*Balanus tintinnabulum occator*. — Zevina & Tarasov, 1963: 89, fig. 9.  
*Megabalanus volcano*. — Newman & Ross, 1976: 69. — Henry & McLaughlin, 1986: 45, figs. 4h, i, 12a–d. — Zevina et al., 1992: 98, fig. 66. — Pitombo, 2004: 275.  
*Balanus volcano*. — Dong et al., 1982: 88, fig.  
 ?*Balanus tintinnabulum* var. *communis*. — Krüger, 1911a: 46, pl. 3 figs. 31 a<sub>1</sub>–b<sub>2</sub>.  
 ?*Balanus (Megabalanus) volcano*. — Yamaguchi, 1973: 133, fig. 11 (1–12), pl. VI figs. 2a–j, 4, 5, pl. VII figs. 1a–2 b, pl. VIII figs. 1–2b.

**Distribution.** Indo-west Pacific: Indian Ocean; Australia (N); Vietnam; Hong Kong; S China Sea; E China Sea, Taiwan; Japan, S Honsyu, Kyusyu & Ryukyu Islands; on rocks, fouling species of ships, floating structures, etc.; littoral (low rocky shores).

**Remarks.** Chan, Prabowo & Lee (2009b: 268) have suggested that previous records of *M. occator* in Taiwan are *M. volcano*.

(95, 113b, 157, 186, 194, 203, 205, 230, 232, 234, 284, 311, 345, 433, 512, 522, 523, 536, 537, 539, 566, 572); (403, part, as *Balanus tintinnabulum* var. *crispatus*); (96, as *Balanus volcano*); (182, 360, 372, 403, as *Balanus tintinnabulum volcano*); (279, ?as *Balanus tintinnabulum* var. *communis*); (349, as *Balanus tintinnabulum peninsularis*); (434, as *Balanus (Megabalanus) volcano*); (505, as *Balanus (Megabalanus) tintinnabulum volcano*); (594, as *Balanus tintinnabulum occator*); (Wu, 1975; Zevina et al., 1992; Leung & Jones, 2000; Pitombo, 2004; Liu & Ren, 2007; Poltarukha & Zvyagintsev, 2008; Chan, Prabowo & Lee, 2009b; Wong et al., 2014).

#### *Megabalanus zebra* (Darwin, 1854)

*Balanus tintinnabulum* var. (4) *zebra* Darwin, 1854: 195, pl. 1 fig. g.  
*Balanus tintinnabulum zebra*. — Pilsbry, 1916: 57, pl. 10 figs. 2, 3. — Dong et al., 1982: 86, fig. A–C.  
*Megabalanus zebra*. — Newman & Ross, 1976: 69. — Henry & McLaughlin, 1986: 47, figs. 2f, 4j–k, 12e–l. — Pitombo, 2004: 275.

**Distribution.** Atlantic Ocean; W Africa; Indo-west Pacific: Indian Ocean; Australia; Thailand; China; Philippines; Taiwan; on rocks, fouling species of ships, floating structures, etc.; littoral (low rocky shores).

(27, 30, 95, 127, 128, 133, 135, 157, 192, 193, 205, 259, 316, 345, 495, 498); (88, 244, as *Balanus tintinnabulum* var. *zebra*); (90, 96, 193, 403, 501, as *Balanus tintinnabulum*

*zebra*) (534, as *Balanus (Megabalanus) tintinnabulum zebra*); (Pitombo, 2004; Liu & Ren, 2007; Chan, Prabowo & Lee, 2009b).

#### ACKNOWLEDGEMENTS

The Singapore Strait marine biodiversity workshop was held on St. John's Island, Singapore from 20 May to 7 June 2013, and was organised by the National Parks Board and National University of Singapore. The workshop, as part of the Comprehensive Marine Biodiversity Survey (CMBS) benefited greatly from generous contributions provided by Asia Pacific Breweries Singapore, Care-for-Nature Trust Fund, Keppel Care Foundation, Shell Companies in Singapore and the Air Liquide Group. We gratefully thank Peter Ng and Tan Koh Siang, National University of Singapore, for their encouragement in producing this checklist of the thoracican barnacles of Singapore, and Serena Teo, Deputy Director (Research), St John's Island Marine Laboratory, Tropical Marine Science Institute, National University of Singapore, for advice regarding fouling cirripedes and access to an unpublished list of barnacles from Singaporean waters. The constructive comments of Benny Chan and John Buckeridge have significantly improved the manuscript and are much appreciated.

#### LITERATURE CITED

- Achituv Y (2004) Coral-inhabiting barnacles (Cirripedia; Balanomorpha; Pyrgomatinae) from the Kermadec Islands and Niue Island, New Zealand. *New Zealand Journal of Marine and Freshwater Research*, 8: 43–49.
- Achituv Y & Newman WA (2002) The barnacles of *Astreopora* (Cirripedia, Pyrgomatini, Scleractinia, Acroporidae): organization plans, host specificity, species richness and geographic range. *Journal of Natural History*, 36(4): 391–406.
- Agassiz A (1872) Revision of the Echini. *Memoirs of the Museum of Comparative Zoology, Harvard*, 3(1–4): 1–762. Museum, Cambridge, Massachusetts, USA.
- Agassiz A (1879) Preliminary report on the Echini of the exploring expedition of H.M.S. Challenger. *Proceedings of the American Academy of Arts & Sciences*, 14: 190–212.
- Agassiz L & Desor PJ (1846) Catalogue raisonné des familles, des genres, et des espèces de la classe des échinodermes. *Annales des sciences naturelles*, 3<sup>e</sup> Série, Zoologie, 6: 305–374.
- Ahyong ST, Lowry JK, Alonso M, Bamber RN, Boxshall GA, Castro P, Gerken S, Karaman GS, Goy JW, Jones DS, Meland K, Rogers DC & Svavarsson J (2011) Subphylum Crustacea Brünnich, 1772. In: Zhang ZQ (ed.) *Animal biodiversity: An outline of higher-level classification and survey of taxonomic richness*. *Zootaxa*, 3148: 165–191.
- Alessandri G. de (1895) Contribuzione allo studio dei Cirripedi fossili d'Italia. *Bollettino della Società Geologica Italiana*, 13(3): 234–314. (1)
- Alessandri G. de (1906) Studi monografici sui Cirripedi fossili d'Italia. *Palaeontographia Italica*, 12: 207–324. (2)
- Anderson DT (1992) Structure, function and phylogeny of coral-inhabiting barnacles (Cirripedia, Balanoidea). *Zoological Journal of the Linnean Society*, 106: 277–339.
- Anderson DT (1993) Addendum/Corrigendum. *Zoological Journal of the Linnean Society*, 105: 377.
- Anderson DT (1994) Barnacles: Structure, function, development and evolution. Chapman & Hall, London, 357 pp.
- Annandale N (1905) Malaysian barnacles in the Indian Museum with a list of the Indian Pedunculata. *Memoirs of the Asiatic Society of Bengal*, 1(5): 73–84. (3)
- Annandale N (1906a) Report on the Cirripedia collected by Professor Herdman, at Ceylon, in 1902. Report to the Government of Ceylon on the Pearl Oyster Fisheries of the Gulf of Manaar, 5(31): 137–150. (4)
- Annandale N (1906b) Natural history notes from the RIMS INVESTIGATOR, Captain IH Heming RN commanding. Series III, No. 12. Preliminary report on the Indian stalked barnacles. *Annals and Magazine of Natural History*, 7(17): 389–400. (5a)
- Annandale N (1906c) Two new barnacles dredged in 1905–1906. *Annals and Magazine of Natural History*, 7(18): 44–47. (5b)
- Annandale N (1907) The fauna of brackish ponds at Port Canning, Lower Bengal. *Records of the Indian Museum*, 1(1): 35–43. (6)
- Annandale N (1907b) Crustacea (Entomostraca). Illustrations of the zoology of the RIMS INVESTIGATOR. Part 1. Calcutta, pls. I–II.
- Annandale N (1909a) An account of the Indian Cirripedia Pedunculata. Part I. Family Lepadidae (sensu stricto). *Memoirs of the Indian Museum*, 2(2): 59–137. (7)
- Annandale N (1909b) Description of a barnacle of the genus *Scalpellum* from Malaysia. *Records of the Indian Museum*, 3: 267–270. (8)
- Annandale N (1910a) Report on the Cirripedia Pedunculata collected by Dr Th Mortensen in the Gulf of Siam. *Videnskabelige Meddelelser fra dansk Naturhistorisk Forening i København*, 1910: 81–86. (9)
- Annandale N (1910b) Notes on the Cirripedia Pedunculata in the collection of the University of Copenhagen. *Videnskabelige Meddelelser fra dansk Naturhistorisk Forening i København*, 1910: 211–218. (10)
- Annandale N (1910c) Description of a new species of *Scalpellum* from the Andaman Sea. *Records of the Indian Museum*, 5(2): 115–116. (11)
- Annandale N (1910d) The Indian barnacles of the subgenus *Smilium*, with remarks on the classification of the genus *Scalpellum*. *Records of the Indian Museum*, 5: 145–55. (12)
- Annandale N (1911a) On the distribution of the different forms of the genus *Ibla*. *Records of the Indian Museum*, 7: 229–230. (13)
- Annandale N (1911b) Some barnacles of the genus *Scalpellum* from Irish seas. *Annals and Magazine of Natural History, Series 8*, 7: 588–590. (14)
- Annandale N (1913) The Indian barnacles of the subgenus *Scalpellum*. *Records of the Indian Museum*, 9(4): 227–236. (16)
- Annandale N (1914). New and interesting pedunculate barnacles from the Indian Seas. *Records of the Indian Museum*, 10(1): 273–80. (17)
- Annandale N (1916a) Barnacles from deep-sea telegraph cables in the Malay Archipelago. *Journal of the Straits Branch of the Royal Asiatic Society*, 74: 281–302. (18)
- Annandale N (1916b) Three plates to illustrate the Scalpellidae and Iblidae of Indian seas, with synonymy and notes. *Memoirs of the Indian Museum*, 6(2): 127–131. (19)
- Annandale N (1924) Cirripedes associated with Indian corals of the families *Astraeidae* and *Fungidae*. *Memoirs of the Indian Museum*, 8(1): 61–68. (20)
- Arnaud PM (1973) Le genre *Lepas* Linné 1758, dans les Terres Australes et Antarctiques Françaises (Cirripedia). *Crustaceana*, 24: 157–162. (21)
- Asami K & Yamaguchi T (1997) Distribution of living and fossil coral barnacles (Cirripedia; Pyrgomatidae) in Japan. *Sessile Organisms*, 14(1): 9–16.
- Aurivillius CWS (1892) Neue Cirripeden aus dem Atlantischen, Indischen und Stillen Ocean. *Öfversigt af Kongliga Vetenskaps-Akademiens Förhandlingar*, 3: 123–135. (22)

- Aurivillius CWS (1894) Studien über Cirripeden. Kungliga Svenska Vetenskaps-Akademiens Handlingar, 26(7): 1–107, pls. 1–9. **(23)**
- Aurivillius CWS (1898b) Cirripèdes nouveaux provenant des campagnes scientifiques de S.A.S. le Prince de Monaco. Bulletin de la Société zoologique de France, 23: 189–98. **(25)**
- Baluk W & Radwanski A (1967) Miocene cirripeds domiciled in corals. Acta Palaeontologica Polonica, 12(4): 457–521. **(26)**
- Barnard KH (1924) Contributions to the Crustacean Fauna of South Africa. No. 7. Cirripedia. Annals of the South African Museum, 20(1): 1–103, 1 pl. **(27)**
- Barnard KH (1925) An addition to the faunal list of South African barnacles. Annals and Magazine of the Natural History Museum, London, 8(2): 247. **(28)**
- Barnes H & Barnes M (1965) Egg size, nauplius size and their variation with local, geographical and specific factors in some common cirripedes. Journal of Animal Ecology, 34(2): 391–402. **(29)**
- Barnes H & Klepal W (1971) The structure of the pedicel of the penis in cirripedes and its relation to other taxonomic characters. Journal of Experimental Marine Biology and Ecology, 7: 71–94. **(30)**
- Bassindale R (1961) On the marine fauna of Ghana. Proceedings of the Zoological Society of London, 137(4): 481–510. **(31)**
- Bassindale R (1964) British barnacles, with keys and notes for the identification of the species. Synopses of the British Fauna. 14. Linnean Society, London, 68 pp. **(32)**
- Bate CS (1888) Report on the Crustacea Macrura collected by HMS Challenger during the years 1873–76. Report on the Scientific Results of the Voyage of HMS Challenger 1873–76, Zoology, 24: i–xc, 1–942, figs. 1–76, pls. 1–150.
- Bernard HM (1896) Catalogue of the madreporarian corals in the British Museum (Natural History): the genus Turbinaria, the genus *Astraeopora*. Volume II. Longmans, Green & Co., London, 1–166 pp.
- Bernard HM (1897) Catalogue of the madreporarian corals in the British Museum (Natural History): the genus *Montipoa*, the genus *Anacropora*. Volume III. Longmans, Green & Co., London, 192 pp.
- Bhatt YM & Bal DV (1960) New records of barnacles from Bombay shores. Current Science, Bangalore, 29: 439–440. **(33)**
- Bielecki J, Chan BKK, Hoeg JT & Sari A (2009) Antennular sensory organs in cyprids of balanomorphan cirripedes: standardizing terminology using *Megabalanus rosa*. Biofouling, 25(3): 203–214.
- Bivona-Bernardi A (1832) Caratteri d'un nuovo genere del Vordine del Cirripedi del Signor de Lamarck. Effemeridi Scientifiche e Letterarie per la Sicilia, 2. Palermo. Pp.14–16, pl. 3 fig. 1.
- Blackmore G (1996) Biomonitoring of heavy metal pollution in Hong Kong coastal waters, using barnacles. Asian Marine Biology, 13(1996): 1–13. **(34)**
- Blainville HMD de (1824) Nematopoda. Dictionnaire des sciences naturelles (Mollusques-Morfil). 32. FG Levrault, Strasbourg, 567 pp.
- Blainville HMD de (1825–1827) Manuel de malacologie et de conchyliologie. FG Levrault, Paris, pl. LXXXVII.
- Borowski GH (1781) Gemeinnützige Naturgeschichte des Thierreichs. Volume 2(1): 21. GL Lange, Berlin & Stralsund.
- Borradaile LA (1900) On some crustaceans from the South Pacific. Part V. Arthrostracans and barnacles. Proceedings of the Zoological Society of London, 1900, 4: 795–799, pl. 51. **(35)**
- Borradaile LA (1903) Marine Crustaceans. Part VII. The barnacles (Cirripedia). In: Gardiner JS (ed.) The Fauna and Geography of the Maldives and Laccadive Archipelagoes, part I, 2(4): 440–443. **(36)**
- Borradaile LA (1916) Crustacea. Part III. British Antarctic (Terra Nova) Expedition, 1910, Natural History Reports, Zoology, 3(4): 127–136. **(37)**
- Borradaile LA (1917) Barnacles from the hull of the Terra Nova. Annals and Magazine of Natural History, Series 8, 19: 229–30.
- Boschma H (1948) The species problem in *Millepora*. Zoologische Verhandelingen, 1: 1–115.
- Broch H (1916) Results of Dr. E. Mjöberg's Swedish scientific expedition to Australia 1910–1913. VIII Cirripeden. Kungliga Svenska Vetenskapsakademiens Handlingar, 52(8): 1–16. **(38)**
- Broch H (1922) Studies on Pacific Cirripedes. Papers from Dr Th. Mortensen's Pacific Expedition 1914–1916 (10). Videnskabelige Meddelelser fra dansk naturhistorisk Forening i København, 73: 215–358. **(39)**
- Broch H (1924a) Cirripedia Thoracica von Norwegen und dem norwegischen Nordmeere. Eine Systematische und biologisch-terreographische Studie. Videnskapsselskapets Skrifter, I. Matematisk-naturvidenskabelige Klasse, 1924, 17: 1–121. **(40)**
- Broch HJ (1924b) La faune des cirripèdes de l'Afrique occidentale d'après nos dernières connaissances. Bulletin de la Société des Sciences Naturelles du Maroc au Rabat, 4: 202–205. **(41)**
- Broch H (1927a) Studies on Moroccan cirripedes (Atlantic coast). Bulletin de la Société des Sciences Naturelles du Maroc au Rabat, 7: 11–38. **(42)**
- Broch H (1927b) Report on the Crustacea Cirripedia. Cambridge Expedition to the Suez Canal, 1924. Transactions of the Zoological Society of London, XXII, Part II(1): 133–138. **(43)**
- Broch H (1931) Indomalayan Cirripedia. Papers from Dr Th. Mortensen's Pacific Expedition 1914–1916, LVI. Videnskabelige Meddelelser fra dansk naturhistorisk Forening i København, 91: 1–146. **(44)**
- Broch H (1935) Cirripeds. The fishery grounds near Alexandria, III. Notes and Memoirs of the Fisheries Research Directorate, Cairo, 10: 1–6. **(45)**
- Broch H (1947) Cirripedes from Indo-Chinese shallow waters. Skrifter Utgitt av det Norske Videnskaps-Akademi i Oslo. Matematisk-Naturvidenskapelige Klasse, 7: 1–32, figs. 1–8. **(46)**
- Bronn HG (ed.) (1865–79) Klassen und Ordnungen des Thier-Reichs. Die Klassen und Ordnungen der Arthropoden wissenschaftlich dargestellt in Wort und Bild, 5, Abtheilung 1, Crustacea, Hälfte 1; Rankenfüssler: Cirripedia Burm.: 406–589, pls. I–VI. CF Winter, Leipzig & Heidelberg.
- Brook G (1889) Report on the Antipatharia. Report on the Scientific Results of the Voyage of HMS Challenger, Zoology, 32(80): 1–222, pls. 1–15.
- Brook G (1892) Preliminary descriptions of new species of *Mdrepora* in the collections of the British Museum. Part II, Series 6. Annals and Magazine of Natural History, 10: 451–465.
- Brook G (1893) Catalogue of the madreporarian corals in the British Museum (Natural History): the genus *Mdrepora*. Volume I. Longmans, Green & Co., London, pp. 1–212.
- Brooks HK & Ross A (1960) *Pyrgoma prefloridanum*, a new species of cirripede from the Caloosahatchee Marl (Pleistocene) of Florida. Crustaceana, 1: 353–365.
- Brown T (1844) Illustrations of the recent conchology of Great Britain and Ireland, with the description and localities of all the species, marine, land, and fresh water. Smith Elder & Company, London, pp. 144.
- Brüggemann F (1877) Neue Korallen-Arten aus dem Rothen Meer und von Mauritius. Abhandlungen herausgegeben vom Naturwissenschaftlichen Verein zu Bremen, 5: 395–400, 2 pls.
- Bruguère M (1789–1791) Encyclopédie méthodique; histoire naturelle des Vers, de Lamarck, continuées par GP Deshayes. Tome 1. Agasse, Paris. [published 1792] **(48)**
- Buckeridge JS (1983) Fossil barnacles (Cirripedia: Thoracica) of New Zealand and Australia. New Zealand Geological Survey, Palaeontological Bulletin, 50: 1–151, 14 pls.

- Buckeridge JS (1994) Cirripedia Thoracic: Verrucomorpha of New Caledonia, Indonesia, Wallis and Futuna Islands. In: Crosnier A (ed.) Résultats des Campagnes MUSORSTOM, 12. Mémoires du Muséum national d'Histoire naturelle, Paris, 4: 87–126. (49)
- Buckeridge JS (1999) A new deep sea barnacle, *Tetrachaelasma tasmanicum* sp. nov. (Cirripedia: Balanomorpha) from the South Tasman Rise, South Pacific Ocean. New Zealand Journal of Marine and Freshwater Research, 33(4):1997 521–532.
- Buckeridge JS (1997) Cirripedia Thoracic: new range and species of Verrucomorpha from the Indian and Southwest Pacific Oceans. In: Crosnier A (ed.) Résultats des Campagnes MUSORSTOM, 18. Mémoires du Muséum national d'Histoire naturelle, Paris, 176: 125–149. (50)
- Buckeridge JS & Newman WA (2006) A revision of the Iblidae and the stalked barnacles (Crustacea: Cirripedia: Thoracica), including new ordinal, familial and generic taxa, and two new species from New Zealand and Tasmanian waters. Zootaxa, 1136: 1–38.
- Burmeister H (1834) Beiträge zur Naturgeschichte der Rankenfusser (Cirripedia). G Reimer, Berlin, pp. 60. (51)
- Cai RX & Huang ZG (1981) Studies on the biology of *Balanus reticulatus* Utinomi in Xiamen Harbour. 1. Breeding, attachment and growth. Acta Zoologica Sinica, 27: 274–280. [In Chinese] (52)
- Cai RX & Huang ZG (1984) Studies on the orientation of cirripedes. I. The orientation of *Balanus cirratus* on the hosts. Oceanologia et Limnologia Sinica, 15(4): 317–328. (53)
- Cai RX & Huang ZG (1993) The orientation of cirripedes on their hosts from Hong Kong waters. In: Morton BS (ed.) The Marine Biology of the South China Sea. Proceedings of the First International Conference on the Marine Biology of Hong Kong and the South China Sea, Hong Kong, 28 October–3 November 1909. Hong Kong University Press. Pp. 493–507. (54)
- Cai L & Li F (1986) The vertical distribution of macro-fouling organisms in the Xiamen Harbour. Tropical Oceanology, 5(4): 10–18. (55)
- Caillaud F (1865) Catalogue des Radiaires, des Annélides, des Cirripèdes et des Mollusques, marins, terrestres et fluviatiles recueillis dans le département de la Loire-Inférieure. Société Académique Loire-Inférieure Nantes. Pp. 36–43. [Cirripedia] (56)
- Calman WT (1918a) The type specimen of *Poecilasma carinatum* Hoek. Annals and Magazine of Natural History, (9)1: 401–408. (57)
- Calman WT (1918b) On barnacles of the genus *Scalpellum* from deep-sea telegraph cables. Annals and Magazine of Natural History, (9)1: 96–124. (58)
- Calman WT (1919) On barnacles of the genus *Megalasma* from deep sea telegraph cables. Annals and Magazine of Natural History (9)4: 361–374. (59)
- Cannon HG (1935) On the rock-boring barnacle *Lithotrya valentiana*. Scientific Reports of the Great Barrier Reef Expedition 1928–1929, 5(1): 1–17. (60)
- Carlgren O (1928) Zur symbiose zwischen Actinien und Paguriden. Zeitschrift für Morphologie und Ökologie der Tiere, 12: 165–173.
- Caziot E (1921) Les Cirripèdes de la mer de Nice. Bulletin de la Société zoologique de France, 46: 51–54. (61)
- Chan BKK (2001) Studies on *Tetraclita squamosa* and *Tetraclita japonica* (Cirripedia; Thoracica) I. Adult morphology. Journal of Crustacean Biology, 21(3): 616–630.
- Chan BKK (2003) Studies on *Tetraclita squamosa* and *Tetraclita japonica* (Cirripedia: Thoracica) II: larval morphology and development. Journal of Crustacean Biology, 23(3): 522–547.
- Chan BKK (2007) Ecology and biodiversity of rocky intertidal barnacles along a latitudinal gradient: Japan, Taiwan and Hong Kong. In: Rigby PR & Shirayama Y (eds.), Publications of the Seto Marine Laboratory, Special Publication Series VIII: Selected papers. NAGISA World Congress 2006, Kyoto University, Osaka, Japan. Pp. 1–14.
- Chan, BKK & Leung PTY (2007) Antennular morphology of the cypris larvae of the mangrove barnacle *Fistulobalanus albicostatus* (Cirripedia: Thoracica: Balanomorpha). Journal of the Marine Biological Association of the United Kingdom, 87: 913–915.
- Chan BKK, Tsang LM & Chu HK (2007a) Morphological and genetic differentiation of the acorn barnacle *Tetraclita squamosa* (Crustacea, Cirripedia) in East Asia and description of a new species of *Tetraclita*. Zoologica Scripta, 36(1): 79–91.
- Chan BKK, Tsang LM & Chu HK (2007b) Cryptic diversity of *Tetraclita squamosa* complex (Crustacea, Cirripedia) in Asia: description of a new species from Singapore. Zoological Studies, 46(1): 46–56.\*
- Chan BKK, Akihisa M & Lee PF (2008) Latitudinal gradient in the distribution of the intertidal acorn barnacles of the *Tetraclita* species complex (Crustacea: Cirripedia) in NW Pacific and SE Asian waters. Marine Ecology Progress Series, 362: 201–210.
- Chan, BKK, Garm A & Høeg JT (2008a) Setal morphology and cirral setation of thoracican barnacle cirri: adaptations and implications for thoracican evolution. Journal of Zoology, 275: 294–306.
- Chan BKK, Hsu C-H & Southward AJ (2008b) Morphological variation and biogeography of an insular intertidal barnacle *Hexechamaesipho pilsbryi* (Crustacea: Cirripedia) in the western Pacific. Bulletin of Marine Science, 83(2): 315–328.
- Chan BKK (2009) Shallow water and deep sea barnacles (Crustacea, Cirripedia Thoracica) collected during the Philippine Panglao 2005 Expedition, with description of two new species. Raffles Bulletin of Zoology, Supplement 20: 47–82.
- Chan BKK, Tsang LM & Shih F-L (2009a) Morphological and genetic differentiations of the stalked barnacle *Heteralepas japonica* Aurivillius, 1892, with description of a new species of *Heteralepas* Pilsbry, 1907, from the Philippines. Raffles Bulletin of Zoology, Supplement 20: 83–85.
- Chan BKK, Prabowo RE & Lee K-S (2009b) Crustacean Fauna of Taiwan: Barnacles, Volume I - Cirripedia: Thoracic excluding the Pyrgomatidae and Acastinae (Chan TY series ed.). National Taiwan Ocean University, Keelung, pp. i-xx, 1-297, figs. 250.
- Chan BKK, Prabowo RE & Lee K-S (2010) North West Pacific deep-sea barnacles (Cirripedia, Thoracica) collected by the Taiwan expeditions, with descriptions of two new species. Zootaxa, 2405: 1–47.
- Chan BKK & Hayashi R (2012) Epibiotic barnacles (Crustacea: Cirripedia: Thoracica) collected by the KUMEJIMA 2009 Expedition, with descriptions of two new species. In: Naruse T, Chan T-Y, Tan HH, Ahyong ST & Reimer JD (eds.) Scientific Results of the Marine Biodiversity Expedition — KUMEJIMA 2009. Zootaxa, 3367: 21–48.
- Chan BKK, Chen Y-Y & Lin H-C (2013) Biodiversity and host specificity of coral barnacles of *Galkinia* (Cirripedia: Pyrgomatidae) in Taiwan, with descriptions of six new species. Journal of Crustacean Biology, 33(3): 392–431.
- Chan BKK & Cheang CC (2016) First discovery of a new species of *Newmanella* Ross, 1969 (Balanomorpha: Tetraclitidae) in the western Pacific, with a note on the new status of *Neonrosella* Jones, 2010. Zootaxa, 4098(2): 201–226.
- Cheang CC, Tsang LM, Chu KH, Cheng I-J & Chan BKK (2013) Host-specific phenotypic plasticity of the turtle barnacle *Chelonibia testudinaria*: A widespread generalist rather than a specialist. PLoS One, 8(3): e57592.
- Chemnitz JH (1785) MeereicheIn. Lepades. Balani. Neues systematisches Conchylien Cabinet, 8. Raspe, Nürnberg, i–xviii, 294–346, pls. 96–100.

- Chen GZ, Dong YM & Cai RX (1987) Studies on the biology of orientation of *Tetraclita japonica* Pilsbry and of *Tetraclita squamosa* (Bruguière) in the harbour of Zhoushan. I. Breeding, attachment and growth. *Acta Oceanologica Sinica*, 9: 94–104. **(62)**
- Chen HN, Tsang LM, Chong VC & Chan BKK (2014) Worldwide genetic differentiation in the common fouling barnacle, *Amphibalanus amphitrite*. *Biofouling*, 30(9), 1067–1078.
- Chen Y-Y, Lin H-C & Chan BKK (2012) Description of a new species of coral-inhabiting barnacle, *Darwiniella angularis* sp. n. (Cirripedia, Pyrgomatidae) from Taiwan. *ZooKeys*, 214: 43–74.
- Chenu JC (1843) Illustrations conchyliologiques, ou descriptions et figures de toutes les coquilles connues vivantes et fossiles, classées suivant le système de Lamarck modifié d'après les progrès de la science; publiées par monographies et en livraisons compos. Volume 1. Paris, no pagination or text; 5 colour pls.
- Chenu JC (1847) Leçons élémentaires sur l'histoire naturelle des animaux, précédées d'un aperçu général sur la zoologie: conchyliologie. JJ Dubochet, Le Chevalier et Cie, Éditeurs, Paris, i–viii, pp. 1–364, figs. 1–124, pls. 1–12.
- Clark W (1980) Additions to the neotropical weevil genus *Rosella* Whitehead (Coleoptera: Curculionidae): *R. triophori* (Gyllenhal), n. comb., transferred from *Lignyodes* Dejean, and *R. arcuata* n. sp. *Coleopterists Bulletin*, 34(93): 299–304
- Coates R (1829) Remarks on the Pedunculated Cirripedes; with descriptions of two new species of *Otione*. *Journal of the Academy of Natural Sciences, Philadelphia*, 6: 132.
- Coker RE (1902) Species of barnacle (*Dichelaspis*) parasites on the gills of edible crabs. *United States Fisheries Commission Bulletin*, Washington, 21: 401–412.
- Colon-Urban R, Cheung PJ, Ruggieri GD & Nigrelli RF (1979) Observations on the development and maintenance of the deep sea barnacle *Octolasmis aymonini geryonophila* (Pilsbry). *International Journal of Invertebrate Reproduction*, 1: 245–252. **(63)**
- Conrad TA (1837) Descriptions of new marine shells from upper California, collected by Thomas Nuttall, Esq. *Journal of the Academy of Natural Sciences, Philadelphia, Series 1*, 7(2): 227–268. **(64)**
- Cornwall IE (1924) Notes on West American whale barnacle. *Proceedings of the California Academy of Sciences, series 4*, 13(26): 421–431. **(65)**
- Cornwall IE (1927) Some North Pacific whale barnacles. *Contributions to Canadian Biology and Fisheries, new series*, 3: 503–517. **(66)**
- Cornwall IE (1953) The central nervous system of barnacles (Cirripedia). *Journal of the Fisheries Board of Canada*, 10(2): 76. **(67)**
- Cornwall IE (1955a) The barnacles of British Columbia. *British Columbia Provincial Museum Department of Education, Handbook 7*: 5–69. **(68)**
- Cornwall IE (1955b) Canadian Pacific Fauna. 10. Arthropoda, 102, Cirripedia. *Journal of the Fisheries Board of Canada*. Pp. 1–49. **(69)**
- Costa OG (1838) Di alcuni Balanidi appartenenti al Regno di Napoli. *Atti della Reale Accademia delle Scienze e Belle-Lettere di Napoli*, 5(2): 17–70. **(70)**
- Costa OG (1839) Cirropodi. In: *Corrispondenza Zoologica, Fauna Reg. Molluchi Cirropedi, Napoli*, 1. Azzolino & Compagno, Napoli. Pp. 194, pls. 12.
- Costa OG & Costa A (1853) *Addizioni a' Decapodi Brachyuri*. In: *Fauna del Regno di Napoli*, 19. Stamperia di Antonio Cons, Napoli.
- Costa E da (1778) *Historia naturalis testaceorum Britanniae, or the British conchology*. London. 254 pp., figs. 200, pls. 17. **(71)**
- Crisp DJ & Costlow J (1963) The tolerance of developing cirripede embryos to salinity and temperature. *Oikos*, 14(1): 22–34. **(72)**
- Crisp DJ & Southward AJ (1961) Different types of cirral activity of barnacles. *Philosophical Transactions of the Royal Society, London, series B*, 243(705): 271–308. **(74)**
- Crisp DJ & Stubbings HG (1957). The orientation of barnacles to water currents. *Journal of Animal Ecology*, 26: 179–196. **(75)**
- Crossland C (1952) *Madreporaria. Hydrocorallinae, Heliopora and Tubipora*. *Scientific Report of the Great Barrier Reef Expedition 1928–1929*, 6: 85–257.
- Dall WH (1872) On the parasites of the cetaceans of the northwest coast of America, with descriptions of new forms. *Proceedings of the California Academy of Sciences*, 4(5): 299–301.
- Dana JD (1846) *Zoophytes*. *United States Exploring Expedition during the years 1838, 1839, 1840, 1841, 1842, under the command of Charles Wilkes, United States Navy, Volume 7*. Greenwood Press, New York, pp. i–vi, 1–740.
- Dana JD (1852) *Crustacea*. *United States Exploring Expedition during the years 1838, 1839, 1840, 1841, 1842, under the command of Charles Wilkes, United States Navy, Volume 13*. C. Sherman, Philadelphia, 1618 pp. [Pt 1: 1–685; Pt 2: 686–1618]
- Daniel A (1955a) Gregarious attraction as a factor influencing the settlement of barnacle cyprids. *Journal of Madras University, series B*, 25(1): 97–107. **(79)**
- Daniel A (1955b) The Cirripedia of the Madras coast. *Bulletin of the Madras Government Museum (Natural History Society), new series*, 6(2): 1–40. **(80)**
- Daniel A (1956) Colour as a factor influencing the settlement of barnacles. *Current Science*, 25: 21–22. **(81)**
- Daniel A (1957a) Illumination and its effect on the settlement of barnacle cyprids. *Proceedings of the Zoological Society of London*, 129(3): 305–313. **(82)**
- Daniel A (1957b) Influence of stage of tide on the attachment of barnacle cyprids. *Journal of the Bombay Natural History Society*, 54(4): 866–868. **(83)**
- Daniel A (1962) A new species of platylepadid barnacle (Cirripedia: Crustacea) from the green turtle (*Eretmochelys* sp.) from little Andaman Island. *Annals and Magazine of Natural History, series 13*, 5: 641–645.
- Daniel A (1972) Marine intertidal barnacles in the Indian Ocean. *Proceedings of the Indian Natural Sciences Academy, Part B*, 38(3/4): 179–189. **(84)**
- Darwin C (1852) A monograph of the subclass Cirripedia, with figures of all the species. The Lepadidae; or, pedunculated cirripedes. *Ray Society, London*, pp. 400, pls. 10. (1851 published 1852) **(86)**
- Darwin C (1854a) A Monograph on the subclass Cirripedia with figures of all the species. The Balanidae, the Verrucidae, etc. *Ray Society, London*, pp. 684, pls. 30. (1854 published 1855) **(88)**
- Darwin C (1854b) A Monograph on the Fossil Balanidae and Verrucidae of Great Britain. *Palaeontographical Society, London*, pp. 44, pls. 2. (1854 published 1855). **(89)**
- Daudin FM (1803) *Histoire naturelle, générale et particulière, des reptiles: ouvrage faisant suite à l'Histoire naturelle générale et particulière, composée par Leclerc de Buffon, et rédigée par CS Sonnini*. Tomes 1–4 published in an. X [1802]; tomes 5–8, in an. XI [1803]. De l'Imprimerie de F. Dufart: Paris; an. X–XI [1802–1803]. Tomes 1–2 reissued in 1805 with new titles–pages: volumes dated an. XIII [1805].
- Davadie C (1963) Étude des Balanes d'Europe et d'Afrique. *Systématique et structure des Balanes fossiles d'Europe et d'Afrique*. Éditions du Centre National de la Recherche Scientifique, Paris, pp. 1–146. **(90)**
- Davadie-Suaudeau C (1952) Contribution à l'étude des Balanidés Tertiaires de l'Algérie. *Bulletin de le Service de la Carte géologique de l'Algérie, séries 1, Paléontologie*, 14: 1–109. **(91)**
- Dawydoff C (1952) Contribution a l'étude des invertébrés de la faune marine benthique de l'Indochine. *Bulletin Biologique de France Belgique, Supplement*, 37(9): 127–131. **(92)**

- Day JH & Morgans JFC (1956) The ecology of South African estuaries. Part 7. The biology of Durban Bay. *Annals of the Natal Museum*, 13(3): 259–312. **(93)**
- De Haan W (1833–1850) Crustacea. In: von Siebold PF (ed.) *Fauna Japonica, sive Descriptio Animalium, quae in itinere per Japoniam, jussu et auspiciis superiorum, qui summum in India Batava imperium tenent, suscepto, annis 1823–1830 collegit, notis, observationibus et adumbrationibus illustravit*. A-J. Lugduni-Batavorum, Leiden, pp. i–xxx, ix–xvi, 1–243, pls. A–J, L–Q, 1–55.
- De Kay JE (1844) *Zoology of New York*. 5. Mollusca, pp. i–viii, 1–271.
- Des Moulins C (1866) Liste des principaux fossiles recueillis par les membres de la société à Cazeneuve dans le Calcaire de Bazas pendant l'excursion de la 50<sup>e</sup> Fête Linnéenne. *Actes de la Société Linné Bordeaux*, 26, séries 3, volume 6: 293–344.
- Dezallier D'Argenville AJ (1742) L'histoire naturelle éclaircie dans une de ses parties principaux, la Conchyliologie, qui traite des Coquillages de mer, de rivière et de terre; ouvrage dans lequel on trouve une nouvelle méthode latine et française de les diviser. 2 volumes. Wien. pls. 80.
- Döderlei L (1885) Seeigel von Japan und Liu-Kiu-Inseln. *Archiv für Naturgeschichte* 51(1): 73–112.
- Dong Y-M & Mao J-R (1956) Preliminary report on Cirripedia of Zhoushan in Zhejiang. *Journal of the Zhejiang Normal Institute*, 2: 283–296.
- Dong Y-M (1982) Marine fouling organisms at Yangpu Harbour. *Nanhai Studia Marina Sinica*, 3: 129–139. **(94)**
- Dong Y-M, Chen Y. & Cai R (1980) Preliminary study on the Chinese cirripedian fauna. *Acta Oceanologia Sinica*, 2(2): 124–131. [in Chinese; English abstract] **(95)**
- Dong Y-M, Dai A, Jiang X, Chen S., Chen Y & Cai, R (1982) Illustrations of Animals from China. *Crustacea*. Volume 1. Science Press, Beijing. 114 pp. **(96)**
- Edmondson CH (1933) Reef and shore fauna of Hawaii. *Bernice P. Bishop Museum, Special Publication*, 22: 1–295. **(97)**
- Edmondson CH (1951). Some central Pacific crustaceans. *Bernice P. Bishop Museum, Occasional Papers*, 20: 183–243. **(98)**
- Eguchi M (1938) A systematic study of the reef-building corals of the Palao Islands. *Palao Tropical Biological Station Studies*, 3: 325–390.
- Ehrenberg GG (1834) Beiträge zur physiologischen Kenntniss der Corallenthiere im Allgemeinen und besonders des Rothen Meeres, nebst einem Versuche zur physiologischen Systematik derselben. *Abhandlungen König-Preuss Akademie der Wissenschaften*, Berlin, 1: 225–380.
- Ellis J (1758) An account of several rare species of barnacles. *Philosophical Transactions*, London, 50(2): 845–855. (read 21 December 1758, published 1759) **(99)**
- Ellis J & Solander D (1786) The natural history of many curious and uncommon zoophytes collected from various parts of the globe. Systematically arranged and described by the late Daniel Solander. Volume 4. Benjamin White & Son, London. 206 pp. pls. 1–63. [Cirripedia pp. 197–198, pl. XV] **(100)**
- Endean R, Kenny R & Stephenson W (1956) The ecology and distribution of intertidal organisms on the rocky shores of the Queensland mainland. *Australian Journal of Marine and Freshwater Research*, 7(1): 88–146. **(101)**
- Endean R, Stephenson W & Kenny R (1956) The ecology and distribution of intertidal organisms on certain islands off the Queensland coast. *Australian Journal of Marine and Freshwater Research*, 7(3): 317–342. **(102)**
- Esper EJC (1793–1797) Fortsetzungen der Pflanzenthiere in Abbildungen nach der Natur mit Farben erleuchtet, nebst Beschreibungen. Volume 1. Raspischen, Nürnberg, pp. 230, pls. 104.
- Fabricius JC (1787) *Mantissa Insectorum, sistens eorum species nuper detectas; adjectis characteribus genericis, differentiis specificis, emendationibus, observationibus*. Volume 1. Hafniae. [= Copenhagen], pp. i–xx, 1–348.
- Fabricius JC (1798) Tillaeg-til Conchyliæ-Slaegterne *Lepas, Pholas, Mya* og *Solen*. *Skrifter Naturhistorie Selskabet Kiøbenhavn*, 4(2): 34–51. **(103)**
- Fan ZG (1981) Studies on the ecology of intertidal zone of the Jiazohou Wan 1. The intertidal zone of rocky shore. *Acta Oceanologia Sinica*, 1: 117–125. **(104)**
- Fischer P (1872) Crustacés Podophthalmaires et Cirripèdes du département de la Gironde et des côtes du Sud-Ouest de la France. *Actes de la Société Linné Bordeaux, séries 3*, 28(8): 405–407, 431–437. **(107)**
- Fischer P (1884) Cirripèdes de l'Archipel de la Nouvelle-Calédonie. *Bulletin de la Société zoologique de France*, 9: 355–360. **(108)**
- Fischer P (1886). Description d'un nouveau genre de Cirripèdes (*Stephanolepas*), parasite des tortues marines. *Actes de la Société Linné Bordeaux*, (4)10: 193–196. **(109)**
- Fischer P (1891) Description d'un nouvelle espèce de *Scalpellum* du Japon. *Bulletin de la Société zoologique de France* 16(189): 116–118.
- Fishelson L (1971) Ecology and distribution of the benthic fauna in the shallow waters of the Red Sea. *International Journal of Life in the Oceans and Coastal Waters*, 10(2): 113–133. **(110)**
- Flowerdew MV (1985) Indices of genetic identity and distance in three taxa within the *Balanus amphitrite* Darwin complex (Cirripedia, Thoracica). *Crustaceana*, 49(1): 7–15.
- Forskål P (1775) *Descriptiones Animalium, Avium, Amphibiorum, Piscium, Insectorum, Vermium; quae in Itinere Orientali Observavit Petrus Forskål*. Prof. Havn. Post Mortem Auctoris edidit. Carsten Neibuhr. Adjuncta est Materia Medica Kahirina atque Tabula Maris Rubri Geographica. Ex Officina Mölleri, aulae Typographi: Haunia. [= Copenhagen], pp. 164.
- Foster BA (1967) A guide to the littoral balanomorph of New Zealand. *Tuatara*, 15(2): 75–86.
- Foster BA (1974) The barnacles of Fiji, with observations on the ecology of barnacles on tropical shores. *Pacific Science*, 28(1): 34–56. **(111)**
- Foster BA (1979) The Marine Fauna of New Zealand: Barnacles (Cirripedia: Thoracica). *New Zealand Oceanographic Institute Memoir* 69: 1–160. Wellington. **(112a)**
- Foster BA (1981) Cirripedes from ocean ridges north of New Zealand. *New Zealand Journal of Zoology*, 8(3): 349–367. **(112b)**
- Foster BA (1980) Further records and classification of scalpellid barnacles (Cirripedia: Thoracica) from New Zealand. *New Zealand Journal of Zoology*, 7: 523–531. **(113a)**
- Foster BA (1982) Shallow water barnacles from Hong Kong. In: Morton BS & Tseng CK (eds.) *The Marine Flora and Fauna of Hong Kong and Southern China*. Hong Kong University Press. Pp. 207–232. **(113b)**
- Foster BA & Newman WA (1987) Chthamalid barnacles of Easter Island; peripheral Pacific isolation of Notochthamalinae new subfamily and *hembeli*-group of Euraphiinae (Cirripedia: Chthamaloidea). *Bulletin of Marine Science*, 41(2): 322–336.
- Galkin SV (1986) The system of coral-inhabiting barnacles (Cirripedia, Balanomorph). *Zoologicheskii Zhurnal*, 65: 1285–1295. [in Russian]
- Gardiner JS (1905) *Madreporaria III. Fungida IV. Turbinolidae*. In: *Fauna and geography of the Maldives and Laccadives Archipelagoes*. Volume 2. Cambridge University Press, Cambridge. Pp. 933–957, pls. 89–93.
- Gauld DT (1957) An annotated check-list of the Crustacea of the Gold Coast. I. Cirripedia. *Journal of the West African Science Association*, 3(1): 10–11. **(114)**

- Gaultierus N (1742) Index testarum cochyliorum, quae adservantur in Museo Nicolai Gaultieri. Albizzini, Florence, pp. i–xxiii, pls. 1–110.
- Gerstaker A (1865–1879) Arthropoda. In: Bronn HG (ed.) Klassen und Ordnungen des Thier-Reichs. Die Klassen und Ordnungen der Arthropoden wissenschaftlich dargestellt in Wort und Bild, 5, Abtheilung 1, Crustacea, Halfte 1; Rankenfussler: Cirripedia Burm. CF Winter, Leipzig & Heidelberg. Pp. 406–589, Pls. I–VI.
- Gevers A & Meuschen FC (1787) Museum Geversianum, sive index rerum naturalium quasi sibi comparavit. Abraham Gevers.
- Ghekker RF (1948) Ktatauskoe Mestornakhozhdnie Faunui i Florui Yurskoghavozrasta. Akademia NAUK CCCP Paleontologicheskii Institut, Trudy, 15, 7–85. [in Russian].
- Gmelin, JF (1791) Caroli a Linn Systema naturae per regna tria naturae. Edition decima tertia. Tom. I. Pars VI. Georg. Emanuel. Beer, Lipsiae [= Leipzig]. Pp. 3021–3910.
- Gordon JA (1970) An annotated checklist of Hawaiian barnacles (Class Crustacea; Subclass Cirripedia) with notes on their nomenclature, habitats and Hawaiian localities. Hawaii Institute of Marine Biology Technical Report, 19: 1–130. (115)
- Gould AA (1841) A report on the Invertebrata of Massachusetts, comprising the Mollusca, Crustacea, Annelida and Radiata. Cambridge, pp. 373. (116a)
- Graaf F de (1952) Some notes on the genus *Lepas* Linn, 1767. Beaufortia, 14: 1–6. (116b)
- Gravier C (1921) Sur deux espes de Cirripes du genre *Acasta* Leach vivant a la cte franaise des Somalis. Bulletin du Musum d’Histoire naturelle, Paris: 353–357. (117)
- Gray JE (1825) A synopsis of the genera of cirripedes arranged in natural families, with a description of some new species. Annals of Philosophy, new series, 10(2): 97–107. (118)
- Gray JE (1830) *Spicilegia Zoologica*; or Original Figures and Short Systematic Descriptions of New and Unfigured Animals. Part 2. Treuttel, Wurtz & Co., London. Pp. 9–12, pls. 7–11.
- Gray JE (1831) Description of two new species of *Serpula*, and an undescribed coral barnacle discovered by Sammuel Pearce Pratt, Esq. In: The Zoological Miscellany. To be continued occasionally. Treuttel, Wurtz and Co., London, pp. 1–86. (119)
- Gray JE (1848) Description of a new species of *Anatifa*. Proceedings of the Zoological Society of London: 44.
- Gray JE (1851) Description of two new genera and some new species of Scutellidae and Echinolampidae in the collection of the British Museum. Proceedings of the Zoological Society of London, 1851(9): 34–38.
- Gruvel A (1896a) Sur la branchie de la *Tetraclita porosa*. Comptes Rendu de l’Academie Scientifique, Paris, 122: 43–44. (120)
- Gruvel A (1896b) Sur quelques pointes de l’anatomie de la *Tetraclita porosa*. Comptes Rendu de l’Academie Scientifique, Paris, 122: 205–207. (121)
- Gruvel A (1900a) tudes de Cirripes. Bulletin du Musum d’Histoire naturelle, Paris, 3: 109–110. (123)
- Gruvel A (1901) Diagnoses de quelques espes nouvelles de Cirripes. Bulletin du Musum d’Histoire naturelle, Paris, 7: 256–263. (124)
- Gruvel A (1902a) Rvision des Cirripes appartenant  la collection du Musum d’Histoire Naturelle, Pdonculs. I. Partie systmatique. Nouvelle Archives du Musum national d’Histoire naturelle, Paris, srie 4, 4: 215–312. (125)
- Gruvel A (1902b) Cirripes. Expditions scientifiques du *Travailleur* et du *Talisman* pendant les annes 1880, 1881, 1882 and 1883. Volume 7. G. Masson, Paris, pp. 178, pls. 7. (126)
- Gruvel A (1903) Rvision des Cirripes appartenant  la collection du Musum d’Histoire Naturelle (Operculs). II. Partie systmatique. Nouvelle Archives du Musum national d’Histoire naturelle, Paris, srie 4, 5: 95–170. (127)
- Gruvel A (1905a) Monographie des Cirripes au Thcostracs. Masson et cie, Paris. 472 pp. (128)
- Gruvel A (1905b) tudes anatomiques sur quelques Cirripes Operculaires du Chile. Zoologische Jahrbucher, Supplement 6 (Fauna Chilensis, III), 2: 307–352. (129)
- Gruvel A (1907a) tude des Cirripes du Muse de Cambridge. Bulletin de la Socit zoologique de France, 32: 162–165. (130)
- Gruvel A (1907b) Cirripes operculs de l’Indian Musum de Calcutta. Memoirs of the Asiatic Society of Bengal, 2(1): 1–10. (131)
- Gruvel A (1908) No. III. tudes des Cirripes de l’Ocean Indian. Transactions of the Linnean Society, London, 13(2): 23–27. (132)
- Gruvel A (1909a) Die Cirripedian der Deutschen Sudpolar-Expedition 1901–1903. Volume 11, Zoologie, 3(2): 193–229. G. Reimer, Berlin. (133)
- Gruvel A (1909b) tude des Cirripes de l’Ocean Indien. Transactions of the Linnean Society, London, series 2, 13(1): 23–27. (134)
- Gruvel A (1912) Mission Gruvel sur la cte occidentale d’Afrique (1909–1910) et collection du Musum d’Histoire Naturelle. Les Cirripes. Bulletin du Musum national d’Histoire naturelle, 18(6): 344–350. (135)
- Gruvel A (1920) Cirripes provenant des campagnes scientifiques de S.A.S. le prince de Monaco (1885–1913). Rsultats des campagnes scientifiques accompls sur son yacht par Albert I<sup>er</sup>, Prince Souverain de Monaco, Monaco, 53: 1–88, pls. 1–7. (136)
- Guiler ER (1956) Supplement to a list of the Crustacea of Tasmania. Records of the Queen Victoria Museum, new series, 5: 1–8. (137)
- Harding JP (1962) Darwin’s type specimens of varieties of *Balanus amphitrite*. Bulletin of the British Museum (Natural History), Zoology, 9(7): 273–296, pls. 1–10. (138)
- Harris DJ, Maxson LS, Braithwaite LF & Crandall KA (2000) Phylogeny of the thoracican barnacles based on 18S rDNA sequences. Journal of Crustacean Biology, 20(2): 393–398.
- Hartline AC (1970) Note on the presence of an acorn barnacle in Tahiti (Cirripedia, Balanidae). Crustaceana, 19(3): 321. (139)
- Hastings RW (1972) The barnacle *Conchoderma virgatum* (Spengler) in association with the isopod *Nerocila acuminata* Schiedte & Meinert, and the orange filefish *Alutera schoepfi* (Walbaum). Crustaceana, 22(3): 274–278. (140)
- Hatai KM (1938) A review of the fossil Cirripedia and sharks’ teeth from the region of the northeast Honsyu, Japan. Bulletin of the Biogeographical Society of Japan, 8(5): 95–102. (141)
- Hatai KM (1939) On the occurrence of *Coronula* from the Kakegawa series in Totomi, Japan. Bulletin of the Biogeographical Society of Japan, 9(15): 261–265. (142)
- Hayasaka I (1933) On the occurrence of fossil *Coronula*. Taiwan Tigaku Kizi, 4(7–9): 49–50. (143)
- Hayasaka I (1935) *Coronula diadema* (L.) in the Tertiary Formation of Taiwan (Formosa). Taiwan Tigaku Kizi, 6(1): 1–3. (144)
- Henry DP (1940a) The Cirripedia of Puget Sound with a key to the species. University of Washington Publications in Oceanography, 4(1): 1–48. (146)
- Henry DP (1940b) Notes on some pedunculate barnacles from the North Pacific. Proceedings of the United States National Museum, 88(3081): 255–236. (147)
- Henry DP (1942) Studies on the sessile Cirripedia of the Pacific coast of North America. University of Washington Publications in Oceanography, 4: 95–134. (148)
- Henry DP (1943) Notes on some barnacles from the Gulf of California. Proceedings of the United States National Museum, 93(3166): 367–373. (149)
- Henry DP (1954) The barnacles of the Gulf of Mexico. In: Gulf of Mexico, its Origin, Waters, and Marine Life. Fisheries Bulletin, 89: 443–446. (150)
- Henry DP (1957) Some littoral barnacles from the Tuamotu, Marshall, and Caroline Islands. Proceedings of the United States National Museum, 107(3381): 25–38. (151)



- Henry DP (1959) The distribution of the *amphitrite* series of *Balanus* in North American waters. In: Ray DL (ed.) Marine Boring and Fouling Organisms, Friday Harbor Symposium. University Washington Press, Seattle. Pp. 190–203, pls. 1–4. **(152)**
- Henry DP (1960) Thoracic Cirripedia of the Gulf of California. *Oceanography* 4(4): 135–158. **(153)**
- Henry DP 1973 Descriptions of four new species of the *Balanus amphitrite* complex (Cirripedia, Thoracica). *Bulletin of Marine Science*, 23(4): 964–1001. **(154)**
- Henry DP & McLaughlin PA (1967) A revision of the subgenus *Solidobalanus* Hoek (Cirripedia Thoracica) including a description of a new species with complemental males. *Crustaceana*, 12(1): 43–58. **(155)**
- Henry DP & McLaughlin PA (1975) The barnacles of the *Balanus amphitrite* complex (Cirripedia, Thoracica). *Zoologische Verhandelingen*, 141: 1–254. **(156)**
- Henry DP & McLaughlin PA (1986). The recent species of *Megabalanus* (Cirripedia: Balanomorpha) with special emphasis on *Balanus tintinnabulum* (Linnaeus) sensu lato. *Zoologische Verhandelingen*, 235: 3–69, figs. 1–14. **(157)**
- Herbst JFW (1782–1804) Versuch einer Naturgeschichte der Krabben und Krebse. 3 volumes. Berlin & Stralsund, pp. 274 + 226 + 216, pls. 72. [1790, 1(8): 239–274, pls. 18–21; 1794, 2(5): 147–162, pls. 37–40; 1801, 3(2): 1–46, pls. 51–54]
- Herbst JFW (1783) Versuch einer Naturgeschichte der Krabben und Krebse nebst einer Systematischen Beischreibung ihrer Verschieden Arten. Volume 1, Parts 2–5. Joh. Casper Fuessly, Zurich, pp. 87–182, pls. 2–9.
- Herbst JFW (1793) Versuch einer Naturgeschichte der Krabben und Krebse nebst einer Systematischen Beischreibung ihrer Verschieden Arten. Volume 2, Part 3. Berlin & Stralsund pp. 79–98, pls. 30–33.
- Herbst JFW (1794) Versuch einer Naturgeschichte der Krabben und Krebse nebst einer Systematischen Beischreibung ihrer Verschieden Arten. Volume 2, Part 5. Berlin & Stralsund pp. 147–162, pls. 37–40.
- Herbst JFW (1796) Versuch einer Naturgeschichte der Krabben und Krebse nebst einer Systematischen Beischreibung ihrer Verschieden Arten. Volume 2, Part 6. Berlin & Stralsund pp. 163–226, pls. 41–46.
- Herbst JFW (1803) Versuch einer Naturgeschichte der Krabben und Krebse nebst einer Systematischen Beischreibung ihrer Verschieden Arten. Volume 3, Part 3. Berlin & Stralsund, pp. 1–54, pls. 55–58.
- Hinds RB (1844) The zoology of the voyage of H.M.S *Sulphur*, 1836–1842. Volume 1, Mollusca. Smith, Elder & Co., London, pp. v +72, pls. 1–21. **(158)**
- Hincks W (1840) Description of a new species of *Balanus*, from the cabinet of Samuel Wright, Esq., of Cork. *Annals of Natural History*, 5(32): 333–334. **(159)**
- Hirano R (1953) On the rearings and metamorphoses of four important barnacles in Japan. *Journal of the Oceanographic Society of Japan*, 8(3–4): 139–144. **(160)**
- Hirano R & Okushi J (1952) Studies on sedentary marine organisms. I. Seasonal variations in the attachment and growth rates of barnacle cyprids in Aburatsubo Bay, near Misaki. *Bulletin of the Japanese Society of Fisheries Science*, 18(11): 639–644. **(161)**
- Hiro F (1931) Notes on some new cirripedes from Japan. *Memoirs of the College of Science, Koyoto Imperial University, Series B*, 7(3): 143–158. **(164)**
- Hiro F (1932a) Report on the biological survey of Mutsu Bay. 25. Cirripedia. *Scientific Reports of the Tohoku Imperial University, Sendai, Japan*, series 4 (Biology), 7: 545–552. **(165)**
- Hiro F (1932b) On the Cirripedia collected in Sado, Miyaki, Itup Islands and Hokkaido. *Dôbutsugaku Zasshi, Zoological Magazine, Tokyo*, 44(530): 467–476. **(166)**
- Hiro F (1932c) Report on the Japanese species of the genus *Calantica*. *Annotationes Zoologicae Japonenses*, 13(5): 467–486. **(168)**
- Hiro F (1933a) Notes on two interesting pedunculate cirripeds *Malacolepas conchicola* n. gen. et sp. and *Koleolepas avis* (Hiro) with remarks on their systematic positions. *Memoirs of the College of Science, Kyoto Imperial University, Series B*, 8(7): 233–247. **(169a)**
- Hiro F (1933b) Report on the Cirripedia collected by the surveying ships of the Imperial Fisheries Experimental Station on the continental shelf bordering Japan. *Records of the Oceanographic Society of Japan*, 5(1): 11–84. **(169b)**
- Hiro F (1934) An new coral inhabiting barnacle, *Pyrgoma orbicellae* n. sp. *Proceedings of the Japanese Academy, Tokyo*, 10(6): 367–369. **(170)**
- Hiro F (1935a) A study of cirripeds associated with corals occurring in Tanabe Bay. *Records of Oceanographic Works, Japan*, 7(1): 1–28. **(171)**
- Hiro F (1935b) The fauna of Akkeshi Bay. II. Cirripedia. *Journal of the Faculty of Science, Hokkaido Imperial University, Series VI (Zoology)*, 4(4): 213–229. **(173)**
- Hiro F (1935c) A study of cirripeds associated with corals occurring in Tanabe Bay. *Records of Oceanographic Works, Japan*, 7(1): 45–72.
- Hiro F (1936a) On the commensalism between the cirripeds and other animals. *Ecological Reviews, Sendai*, 2(1): 58–65. **(175)**
- Hiro F (1936b) Report on the Cirripedia collected in the Malayan waters by the ship 'Zhuicho-Marui'. *Japanese Journal of Zoology*, 6(19): 621–636. **(176)**
- Hiro F (1936c) Descriptions of three new species of Cirripedia from Japan. *Bulletin of the Biogeographical Society of Japan*, 6(23): 221–230. **(177)**
- Hiro F (1936d) On the geographical distribution of *Ibla*, a littoral cirriped. *Bulletin of the Biogeographical Society of Japan*, 6(23): 215–220. **(178)**
- Hiro F (1936e) Occurrence of the cirriped *Stomatolepas elegans* on a loggerhead turtle found at Seto. *Annotationes Zoologicae Japonenses*, 15(3): 312–320. **(179)**
- Hiro F (1937b) Cirripeds of the Palao Islands. *Palao Tropical Biological Station Studies*, 1: 37–72. **(181)**
- Hiro F (1937c) Studies on the cirripedian fauna of Japan. II. Cirripeds found in the vicinity of the Seto Marine Biological Laboratory. *Memoirs of the College of Science, Koyoto Imperial University, Series B*, 12(3) (17): 385–478. **(182)**
- Hiro F (1937d) Order Thoracica I (Cirripedia Pedunculata). *Fauna Nipponica*, 9(5): 1–116. **(183)**
- Hiro F (1938a) On the Japanese forms of *Balanus amphitrite* Darwin. *Zoological Magazine, Tokyo*, 50(6): 299–313. **(184)**
- Hiro F (1938b) Notes on the animals found on *Macrocheira kaempferi* de Haan. I. Cirripeds. II. Molluscs. *Annotationes Zoologicae Japonenses*, 17(3/4): 465–474. **(185)**
- Hiro F (1938c) On the resistance of some littoral barnacles to altered salinity and sun exposure. *Botany & Zoology, Tokyo*, 6: 1686–1690; 1848–1854. **(186)**
- Hiro F (1938d) Studies on animals inhabiting reef corals. II. Cirripeds of the genera *Creusia* and *Pyrgoma*. *Palao Tropical Biological Station Studies*, 3: 391–416. **(187)**
- Hiro F (1939a) Studies on the Cirripedian fauna of Japan. V. Cirripeds of the northern part of Honsyu. *Scientific Reports, Tohoku Imperial University, Series 4 (Biology)*, 15(2–3): 201–218. **(188)**
- Hiro F (1939b) Distribution of littoral barnacles in Formosa. *Zoological Magazine, Tokyo*, 51: 128. **(189)**
- Hiro F (1939c). Some barnacles from the Ogasawara Islands. *Annotationes Zoologicae Japonenses*, 18(1): 49–57. **(190)**
- Hiro F (1939d) On the barnacle communities at the Madarai Pier in Kororu Island, Palao. *Palao Tropical Biological Station Studies*, 4: 585–595. **(191)**

- Hiro F (1939e) Studies on the Cirripedian Fauna of Japan. III. Supplementary notes on the cirripeds found in the vicinity of Seto. *Memoirs of the College of Science, Kyoto Imperial University, Series B*, 15(2): 237–244. **(192)**
- Hiro F (1939f) Studies on the Cirripedian Fauna of Japan. IV. Cirripeds of Formosa (Taiwan), with some geographical and ecological remarks on the littoral forms. *Memoirs of the College of Science, Kyoto Imperial University, Series B*, 15(2): 245–284. **(193)**
- Hiro F (1939g) Studies of the Cirripedian Fauna of Japan. V. Cirripeds of the northern part of Honsyu. *Scientific Reports, Tohoku Imperial University, Series 4*, 14(2&3): 201–218. **(194)**
- Høeg J, Whyte MA, Glenner H & Schram FR (1999) New evidence on the basic phylogeny of the Cirripedia Thoracica. In: Schram FR & von Vaupel Klein JC (eds.) *Crustaceans and the Biodiversity Crisis. Proceedings of the Fourth International Crustacean Congress, 1998. Volume 1*. Brill Publishers, Leiden. Pp. 101–114.
- Høeg JT & Møller OS (2006) When similar beginnings lead to different ends: Constraints and diversity in cirripede larval development. *Invertebrate Reproduction & Development*, 49(3): 125–142.
- Hoek PPC (1883) Report on the Cirripedia collected by HMS Challenger during the years 1873–1876. Report of the Scientific Results from the Exploratory Voyages of HMS Challenger, *Zoology*, 8(25): 1–169. **(195)**
- Hoek PPC (1907a) The Cirripedia of the Siboga Expedition. A. Cirripedia Pedunculata. *Siboga Expeditie Monographe*, 31a: V–XXV, 1–127. **(196)**
- Hoek PPC (1907b) Cirripedia. In: *Expédition antarctique Belge, Résultats du Voyage du S.Y. Belgica, en 1897–1898–1899 sous le commandement de A. de Gerlache de Gomery. Rapports scientifiques, Zoologie: Cirripedia: 3–9*. J-E Buschmann, Anvers. **(197)**
- Hoek PPC (1909) Die Cirripeden des nordischen Planktons, VIII. *Nordischen Plankton*, 11: 265–331. Lipsius & Fischer, Kiel & Leipzig. **(198)**
- Hoek PPC (1912) On the species of the genus *Balanus* collected in the Malay Archipelago during the Cruise of the Dutch Man-of-War, Siboga. Report of the British Association for the Advancement of Science 81st Meeting, 1911. Pp. 407–408. **(199)**
- Hoek PPC (1913) The Cirripedia of the Siboga Expedition. B. Cirripedia Sessilia. *SIBOGA Expeditie Monographe*, 31b: iii–xxv, 129–275. **(200)**
- Holthuis LB (1963) Preliminary descriptions of some new species of Palinuridae. *Proceedings of the Koninklijke Nederlandse Akademie van Wetenschappen Amsterdam, Series C*, 66(1): 54–60.
- Holthuis LB (1969) Enkele interessante Nederlandse Crustacea. *Bijdragen tot de faunistiek van Nederland. I. Zoologische Bijdragen, Leiden*, 2: 34–48. **(201)**
- Holthuis LB & Heerebout GR (1972) Vonsten van de zeepok *Balanus tintinnabulum* (Linnaeus, 1758) in Nederland. *Bijdragen tot de faunistiek van Nederland. II. Zoologische Bijdragen, Leiden*, 13: 24–31.
- Holthuis LB (1982) The nomenclature of some coral-inhabiting barnacles of the family Pyrgomatidae (Cirripedia, Balanomorpha). *Crustaceana*, 43(3): 316–320.
- Hooper JNA (1996) Revision of Microcionidae (Porifera: Demospongiae), with description of Australian species. *Memoirs of the Queensland Museum* 40: 1–626.
- Hosie AM (2014) Review of the stalked barnacle genus *Koleolepas* (Cirripedia: Koleolepadidae), with new records from Australian waters. *Records of the Western Australian Museum*, 29: 1–9.
- Huang X, Liu J, Liu J & Peng S (1994) Ecological studies on marine fouling organisms on oil platforms in the Bohai Sea. *Studia Marina Sinica*, 35: 131–141. **(202)**
- Huang XM, Yan SK, Lin S & Zheng DQ (1992) Biofouling communities on piers and pilings in Mirs Bay. In: Morton BS (ed.) *Proceedings of the Fourth International Marine Biological Workshop: The Marine Flora and Fauna of Hong Kong and southern China, Hong Kong*, 1989. Hong Kong University Press. Pp. 529–543. **(203)**
- Huang X, Yin J, Liu J, Peng S, Huang G, Liu S, Wang X, Liu W & Cao J (1994) Ecological studies of marine fouling organisms on oil platforms in the Bohai Sea. *Studia Marina Sinica*, 35: 131–141. **(204)**
- Huang ZG (ed.) (1994) *Marine species and their distribution in China's Seas*. Ocean Press, Beijing, China, Pp. 516–523. [Cirripedia] **(205)**
- Huang ZG, Cai RX & Xu Y (1982) On the distributional characteristics of fouling organisms in Dongshan Bay. *Oceanologia Sinica*, 1(2): 267–274. **(206)**
- Huang ZG, Cai RX, Jiang JX, Cai EX & Wu QQ (1982) Biofouling of the buoys off the Qiongzhou Channel and Leizhou Peninsula coast, South China Sea. *Oceanologia et Limnologia Sinica*, 13: 259–266. **(207)**
- Huang ZG, Li CY, Zhang LX & Li FR (1979) Studies on the ecology of fouling and boring organisms in Zhoushan waters, East China Sea. *Acta Oceanologia Sinica*, 1(2): 299–310. [In Chinese] **(208)**
- Huang ZG, Li CY, Zhang LX, Li FR & Zheng CX (1981a) The distribution of fouling organisms in Changjiang River Estuary. *Oceanologia et Limnologia Sinica*, 12(6): 531–537. **(209)**
- Huang ZG, Li CY, Zhang LX, Li FR & Zheng CX (1981b) On the marine fouling and boring organisms off Zhejiang southern coast. *Acta Oceanologia Sinica*, 3(4): 634–638. **(210)**
- Huang ZG & Mak PMS (1982) Biofouling in Tolo Harbour. In: Morton BS & Tseng CK (eds.) *The Marine Flora and Fauna of Hong Kong and Southern China*. Hong Kong University Press. Pp. 767–787. **(211)**
- Huang ZG, Mak PMS & Morton BS (1986) The cirripede foulers of Hong Kong waters. *Transactions of the Chinese Society of Crustacea*, 1986: 109–117. **(212)**
- Huang ZG, Lin S, Li CY, Wang J. & Yan SK (1993) Fouling organisms at Daya Bay Nuclear Power Station, China. In: Morton BS (ed.) *The Marine Biology of the South China Sea. Proceedings of the First International Conference on the Marine Biology of Hong Kong and the South China Sea, Hong Kong, 28 October–3 November 1990*. Hong Kong University Press. Pp. 121–130. **(213)**
- Hudinaga M. & Kasahara H (1942) On the rearing and metamorphosis of *Balanus amphitrite hawaiiensis* Broch. *Dobutagaku Zassi [Zoological Magazine]*, 54(3): 108–118. **(214)**
- Hutton FW (1879) List of the New Zealand Cirripedia in the Otago Museum. *Transactions of the Royal Society of New Zealand*, 11: 328–330. **(215)**
- Ikeya N & Yamaguchi T (1993) An introduction to crustacean paleontology (University of the Philippines, Biology 93). University of Tokyo, p. 148.
- Ishida S & Yasui R (1938) Free-swimming stages of *Balanus amphitrite albicostatus*. *Botany & Zoology, Tokyo*, 5: 1659–1666. **(217)**
- Jacquinet H & Lucas PH (1853) *Crustacea*. In: *Voyage au Pôle Sud et dans l'Océanie sur les corvettes l'ASTROLABE et la ZÉLÉE, exécuté par ordre du roi pendant les années 1837–1838–1839–1840, sous le commandement de M. Dumont-d'Urville, Capitaine de vaisseau; publié par ordre du gouvernement, sous la direction supérieure de M. Jacquinet, Capitaine de vaisseau, commandant de la Zélée*. Gide & J Baudry: Paris, Zoologie par Messrs Hombron & Jacquinet, 3, pp. 107, Atlas, Zoologie, pls. 1–9.
- Jeffries WB & Voris HK (1996) A subject-indexed bibliography of the symbiotic barnacles of the genus *Octolasmis* Gray, 1825 (Crustacea: Cirripedia: Poecilasmidae). *Raffles Bulletin of Zoology*, 44(2): 575–592. **(218)**

- Jeffries WB, Voris HK & Man YC (1988) *Octolasmis collare*, a new species of pedunculate barnacle from the seas adjacent to **Singapore**. Indo-Malayan Zoology, 5: 111–116. \*(219)
- Jeffries WB, Voris HK & Poovachiranon S (1992) Age of the mangrove crab *Scylla serrata* at colonization by stalked barnacles of the genus *Octolasmis*. Biological Bulletin, 187: 188–194. (220)
- Jeffries WB, Voris HK, Poovachiranon S & Heil LC (1995) The life-cycle stages of the lepadomorph barnacle *Octolasmis cor* and methods for their laboratory culture. Phuket Marine Biology Centre Research Bulletin, 60: 29–35. (221)
- Jeffries WB, Voris HK & Yang CM (1982) The distribution of the pedunculate barnacle *Octolasmis* in the seas adjacent to **Singapore**. Journal of Crustacean Biology, 2(4): 562–569. \*(222)
- Jeffries WB, Voris HK & Yang CM (1985) Growth of *Octolasmis cor* (Durivillius, 1892) on the gills of *Scylla serrata* (Forskål, 1755). Biological Bulletin, 169(1): 291–296. (223)
- Jeffries WB, Voris HK & Yang CM (1989a) A new mechanism of host colonization: pedunculate barnacles of the genus *Octolasmis* on the mangrove crab *Scylla serrata*. Ophelia, 31(1): 51–58. (224)
- Jeffries WB, Voris HK, & Yang CM (1989b) Observations on the incidence of the pedunculate barnacle *Octolasmis warwickii* (Gray, 1825) on horseshoe crabs (Xiphosura) in the seas adjacent to Singapore. Raffles Bulletin of Zoology, 37(1&2): 58–62. \*(225)
- Jeffries WB, Voris HK & Yang CM (1992) Species recognition among the pedunculate barnacles (Cirripedia Thoracica) on the mangrove crab *Scylla serrata*. Raffles Bulletin of Zoology, 40(1): 85–92. (226)
- Jennings LS (1918) Revision of the Cirripedia of New Zealand. Transactions of the New Zealand Institute, 50: 56–63. (228)
- Jensen PG, Moyses J, Høeg JT & Al-Yahya H (1994) Comparative SEM studies of lattice organs: putative sensory structures on the carapace of larvae from Ascothoracica and Cirripedia (Crustacea Maxillopoda Thecostraca). Acta Zoologica, Stockholm, 75(2): 125–142.
- Jones B (1979) *Nanukidium*, a new name for *Rosella*, Jones, 1978. Journal of Palaeontology, 53(5): 1261.
- Jones DS (1990) The shallow-water barnacles (Cirripedia: Lepadomorpha, Balanomorpha) of southern Western Australia. In: Wells FE, Walker DI, Kirkman H & Lethbridge R (eds.) Proceedings of the Third International Marine Biological Workshop: The Marine Flora and Fauna of Albany, Western Australia, 1988. 1. Western Australian Museum, Perth. Pp. 333–437. (229)
- Jones DS (1991) A history of the discovery and description of Australian barnacles (Cirripedia: Thoracica), including a bibliography of reference works. Archives of Natural History, 18(2): 149–178. (230)
- Jones DS (1992a) Scalpellid barnacles (Cirripedia: Thoracica) from the northeastern and central eastern Australian continental shelf and slope. Memoirs of the Queensland Museum, 32(1): 145–178. (231)
- Jones DS (1992b) A review of Australian fouling barnacles. Asian Marine Biology, 9: 89–100. (232)
- Jones DS (1992c) Occurrence of the barnacle *Balanus trigonus* Darwin on the asteroid *Anthenea flavescens* Gray. In: Morton BS (ed.) Proceedings of the Fourth International Marine Biological Workshop on the Marine Flora and Fauna of Hong Kong and southern China, Hong Kong, 1989. Hong Kong University Press. Pp. 453–458. (233)
- Jones DS (2000) Crustacea Cirripedia Thoracica: Chionelasmatoidea and Pachylasmatoidea (Balanomorpha) of New Caledonia, Vanuatu and Wallis and Futuna Islands, with a review of all currently assigned taxa. In: Crosnier A (ed.) Résultats des Campagnes MUSORSTOM, 21. Mémoires du Muséum national d'Histoire naturelle, Paris, 184: 141–283.
- Jones DS (2004) Barnacles (Cirripedia: Thoracica) of the Dampier Archipelago, Western Australia. In: Jones DS (ed.) Report on the results of the Western Australia Museum/Woodside Energy Limited Partnership to explore the Marine Biodiversity of the Dampier Archipelago, Western Australia 1998–2002. Records of the Western Australian Museum, Supplement 66: 121–157.
- Jones DS (2010) The littoral and shallow-water barnacles (Crustacea: Cirripedia) of south eastern Queensland. In: Davie PJF & Phillips JA (eds.) Proceedings of the Thirteenth International Marine Biological Workshop, the Marine Flora and Fauna of Moreton Bay, Queensland. Memoirs of the Queensland Museum-Nature, 54(3): 199–233.
- Jones DS (2012) Australian barnacles (Cirripedia: Thoracica), distributions and biogeographic affinities. Integrative and Comparative Biology, 52(3): 366–287.
- Jones DS, Anderson JT & Anderson DT (1990) Checklist of the Australian Cirripedia. Technical Reports of the Australian Museum 3: 1–28. (234)
- Jones DS & Hewitt MA (1996) Barnacles (Cirripedia). In: Hutchins JB, Slack-Smith SM, Marsh LM, Jones DS, Bryce CW, Hewitt MA & Hill A (eds.) Marine Biological Survey of the Muiron Islands and the eastern shore of Exmouth Gulf. Report to the Ocean Rescue 2000 Program (Project number G0012/94), February, 1996. Western Australian Museum, Perth. Pp. 43–53. (235)
- Jones DS, Hewitt MA & Sampey A (2000) A checklist of the Cirripedia of the South China Sea. Raffles Bulletin of Zoology, Supplement 8 (Biodiversity of the South China Sea): 233–307.
- Jones DS & Morton B (2008) Barnacles (Crustacea: Cirripedia) from Conic Island Cave, Hong Kong. In: Bamber RN, Morton B & Robbins R (eds.) The joint Swire Institute of Marine Science, Hong Kong, and Natural History Museum, London, Hong Kong Submarine Caves Expedition, 2002. Journal of Natural History, 42(9–12): 821–824.
- Jones DS & Özdikmen H (2008) *Fischeriella* nom. nov., a replacement name for the genus *Temnaspis* Fischer, 1884 (Crustacea: Cirripedia) non Lacordaire, 1845. Munis Entomology & Zoology, 3(1): 539–540.
- Karande A (1974b) *Balanus variegatus*, the laboratory reared larvae compared with *B. amphitrite amphitrite*. Crustaceana, 26: 229–235. (240)
- Karande A (1979) The nauplii of *Balanus kondakovi*. Proceedings of the Indian Academy of Sciences, Section B, 88: 77–83. (241)
- Karande A & Palekar V (1963a) On a shore barnacle *Chthamalus malayensis* Pilsbry from Bombay (India). Annals and Magazine of Natural History, Series 13, 6: 231–234. (242)
- Karande A & Palekar V (1963b) Observations on the breeding activity of the shore barnacle *Chthamalus malayensis* Pilsbry in Bombay Harbor. Defence Science Journal, 13: 131–137. (243)
- Karande A & Palekar V (1966) The sessile barnacles (Cirripedia) of the Bombay Coast. Journal of the Bombay Natural History Society, 63(1): 139–151. (244)
- Kawahara T (1961) Regional differences in the composition of fouling communities in Ago Bay. Report of the Faculty of Fisheries, Prefectural University of Mie, 4(1): 65–80. (245)
- Kawahara T (1962) Studies on the marine fouling communities. I. Development of a fouling community. Report of the Faculty of Fisheries, Prefectural University of Mie, 4(2): 27–41. (246)
- Kawahara T (1963a) Studies on the marine fouling communities. II. Differences in the differences of the test block communities with reference to the chronological differences of their initiation. Report of the Faculty of Fisheries, Prefectural University of Mie, 4(3): 391–418. (247)
- Kawahara T (1963b) Invasion into Japanese waters by the European barnacle *Balanus improvisus* Darwin. Nature, 198 (4877): 301. (248)

- Kawahara T (1965) Studies on the marine fouling communities. III. Seasonal changes in the initial development of test block communities. Report of the Faculty of Fisheries, Prefectural University of Mie, 5(2): 319–364. **(249)**
- Kawahara T & Izizima H (1960) On the constitution of marine fouling communities at various depths in Ago Bay. Report of the Faculty of Fisheries, Prefectural University of Mie, 3(3): 582–594. **(250)**
- Kishinouye K (1891) *Cyanea nozakii*, n. sp. Zoological Magazine, Tokyo 3(33): 93–95, 1 pl. [In Japanese with German diagnosis]
- Kolbasov GA (1993) Revision of the genus *Acasta* Leach (Cirripedia: Balanoidea). Zoological Journal of the Linnean Society, 109: 395–427. **(252)**
- Kolosváry G (1939) Beiträge zur Variabilität der Cirripeden-Unterart *Balanus amphitrite communis* Darwin. Zoologischer Anzeiger, 126(5/6): 129–137. **(253)**
- Kolosváry G (1941a) Die Formenkreise der Chthamaliden. Zoologischer Anzeiger, 133(3/4): 67–81. **(254)**
- Kolosváry G (1941b) Über die Variabilität der Cirripeden-Art *Balanus trigonus* Darwin. Zoologischer Anzeiger, 135(9/10): 210–216. **(255)**
- Kolosváry G (1941c) Tengerbiológiai tanulmány a kacsclábúak puhatestűek és korallok társulásáról. A Tenger: tudományos és társadalmi, tengerészeti és közgazdasági havi folyóirat : a Magyar Adria Egyesület közlönye [The Sea: marine science and social and economic monthly magazine: a journal of the Hungarian Adria Association], 31(1–3): 1–16. **(256)**
- Kolosváry G (1942a) Über die Variabilität der *Coronula* Cirripeden. Zoologischer Anzeiger, 138(5/6): 138–143. **(257)**
- Kolosváry G (1942b) Studien an Cirripeden. Zoologischer Anzeiger, 137(7/8): 138–150. **(258)**
- Kolosváry G (1943) Cirripedia Thoracica in der Sammlung des Ungarischen National-Museums. Annales historico-Naturales Musei Nationalis Hungarici, 36: 67–120. **(259)**
- Kolosváry G (1947a) A study of cirripedes in the collection of the Hungarian National Museum, Budapest. Proceedings of the Zoological Society of London, 117(2–3): 424–427. **(260)**
- Kolosváry G (1947b) A study of cirripedes associated with corals in the collection of the Hungarian National Museum, Budapest. Proceedings of the Zoological Society of London, 117(2/3): 425–428. **(261)**
- Kolosváry G (1947c) New data of cirripeds associated with corals. Annals and Magazine of Natural History, (11)14(113): 358–368. **(262)**
- Kolosváry G (1948) Helvétii emeletbeli új Balanidák Varpalotáról. Különlenyő-mat à Földtani Közlöny. [New balanids from the Middle Miocene of Varpalota in Hungary], 79(1–4): 102–112
- Kolosváry G (1950) On some balanids living in corals, collected by the Snellius Expedition in 1930. Zoologische Mededeelingen, Leiden, 30(19): 289–296. **(263)**
- Kolosváry G (1951a) A new species of barnacle. Acta Biologica Academiae Scientiarum Hungaricae, 2(1–3): 287–289. **(265)**
- Kolosváry G (1951b) Über die mit Korallen in synköse lebenden Balaniden. Acta Biologica Academiae Scientiarum Hungaricae, 2(1–3): 291–297. **(266)**
- Kolosváry G (1951c) Les Balanide de la Méditerranée. Acta Biologica Academiae Scientiarum Hungaricae, 2(4): 411–413. **(267)**
- Kolosváry G (1956) Phylogenetische beiträge zur gattung *Balanus*. Acta Biologica Academiae Scientiarum Hungaricae, 2(1–3): 187–191. **(268)**
- Kolosváry G (1959) A statistical study of the Miocene balanids from Hungary. Journal of Paleontology, 33(1): 196–198. **(269)**
- Kolosváry G (1961a) Enumeration des Balanides fossiles du Turkestan et de l'Uzbekistan. Bulletin du Société Linnéenne de Lyon, 30(4): 78. **(270)**
- Kolosváry G (1961b) Einige interessante Balanus-Funde aus der Burdigalienstufe von Turkmenistan. Acta biologica Szegediensis (new series), 7(1–2): 99–102. **(271)**
- Kolosváry G (1961c) Further fossil balanids from the USSR. Acta biologica Szegediensis (new series), 7(3–4): 149–154. **(272)**
- Kolosváry G (1962a) Káspi-és Aral-tó Környeki neogen Balanidák. Magyar Tudományos Akadémia Biológiai Tudományok Osztályának Közleményei, 5(3–4): 203–216. **(273)**
- Kolosváry G (1962b) New data to the balanida-fauna of the Burdigalien of Karakum. Acta biologica Szegediensis (new series), 8(1–4): 193–197. **(275)**
- Kolosváry G (1962c) New micro-balanids from Tongatabu. Acta biologica Szegediensis (new series), 8(1–4): 199–202. **(276)**
- Kolosváry G (1967) Neue Angaben zur Weltverbreitung einiger Cirripedier. Proceedings of the Symposium on Crustacea, India, 1: 391–394. **(277)**
- Korschelt E (1933) Über zwei parasitäre Cirripeden, *Chelonibia* und *Dendrogaster*, nebst Angaben über die Beziehungen der Balanomorphen zu ihrer Unterlage. Zoologische Jahrbücher, 64:1–40. **(278)**
- Krüger P (1911a) Beiträge zur Cirripedenfauna Ostasiens. In: Doflein F (ed.) Beiträge zur Naturgeschichte Ostasiens. Kongelige Bayerische Akademie der Wissenschaften, Munich Mathematische-physikalische Klasse, Abhandlungen Supplement-Band 2(6): 1–72. **(279)**
- Krüger P (1911b) Zur Cirripedenfauna Ostasiens. Zoologischer Anzeiger, 38(20/21): 459–464. **(280)**
- Krüger P (1912) Über einige interessante Vertreter der Cirripedia Thoracica. In: Doflein F (ed.) Beiträge zur Naturgeschichte Ostasiens. Kongelige Bayerische Akademie der Wissenschaften, Munich Mathematische-physikalische Klasse, Abhandlungen Supplement-Band 2(8): 9–16. **(281)**
- Krüger P (1914) Cirripeden. In: Michaelsen W & Hartmeyer R (eds.) Die Fauna Südwest-Australiens, 4(11): 427–441. **(282)**
- Krüger P (1927) Cirripedia Thoracica der Dänischen Gewässer. Videnskabelige Meddelelser Naturhistorisk Forening i København, 84: 11–16. **(283)**
- Krüger P (1940) Cirripedia. In: Bronn's Klassen und Ordnungen des Tierreichs, Band. 5, Crustacea, Abhandlungen 1, Buch 3, Teil III: 1–560. Leipzig. **(284)**
- Kujawa SM (1971) Szczególny przypadek kemensalizmu kraba *Geryon. quinquedena* Smith z dwoma gatunkami kaczenic *Octolasmis geryonophila* Pilsbry i *O. lowei* Lessona, Przegląd Zoologiczny, Wrocław [= Breslau], 15(3): 285–286. **(286)**
- Lacordaire JT (1845) Monographie des Coléoptères subpentamères de la famille des Phytophages. Tome premier. Mémoires de la Société royale des Sciences de Liege, 3: LIII + pp. 740.
- Lakshmana Rao MV & Newman WA (1972) Thoracic Cirripedia from Guyots of the mid-Pacific mountains. Transactions of the San Diego Society of Natural History, 17(6): 69–94. **(287)**
- Lamarck JBPA de M de (1802) Mémoire sur la Tubicinelle. Annales du Muséum national d'Histoire naturelle, Paris, 1: 461–464. **(288)**
- Lamarck JBPA de M de (1806) Discours d'Ouverture du Cours des Animaux sans Vertèbres, prononcé dans le Muséum d'Histoire naturelle en mai 1806. Paris, 1806. 8 volumes.
- Lamarck JBPA de M de (1814) Sur les polypiers empâtés. Annales du Muséum national d'Histoire naturelle: 294–312; 370–386; 432–458. [1813]
- Lamarck JBPA de M de (1816) Echinides. In: Histoire naturelle des animaux sans vertèbres. Tome 1, Volume 3. Verdière, Paris, pp. 1–59.
- Lamarck JBPA de M de (1816) Histoire naturelle des animaux sans vertèbres. Tome 2. Verdière, Paris, pp. 568.
- Lamarck JBPA de M de (1818) Histoire naturelle des animaux sans vertèbres. Tome 5. Deterville, Paris pp. 612. **(290)**
- Lamarck JBPA de M de (1822) Histoire naturelle des animaux sans vertèbres. Tome 12. Verdière, Paris.

- Lamberts AE (1980) Two new species of *Astreopora* (Cnidaria, Anthozoa, Astroceoniidae) from the mid-Pacific. *Pacific Science*, 34: 261–267.
- Lanchester WF (1902) On the Crustacea collected during the Skeat Expedition to the Malay Peninsula. *Proceedings of the Zoological Society of London*, 2(3): 363–381. **(291)**
- Lang CN (1772) *Methodus nova et facilis testacea marina in suas classes, genera et species distribuenda*. Lucernae.
- Latreille PA (1804) Des langoustes du Muséum national d'Histoire naturelle. *Annals du Muséum national d'Histoire naturelle*, Paris, 3: 388–395.
- Latreille PA (1829) Crustacea, Arachnides et partie des Insectes. In: Cuvier LGC, *Le Règne Animal, distribué d'après son organisation, pour servir de base à l'histoire naturelle, des animaux et d'introduction à l'anatomie comparée*. Volume 4, 2<sup>nd</sup> Edition. Déterville, Paris, pp. xxvii, 584.
- Leach WE (1817) Distribution systématique de la classification des Cirripèdes. *Journal de Physique, de Chimie et d'Histoire naturelle et des Arts*, Paris, 85: 67–69. **(292)**
- Leach WE (1818) In: *Narrative of an Expedition to explore the river Zaire, usually called the Congo, in South Africa, in 1816, under the direction of Captain JK Tuckey, Royal Navy. To which is added the journal of Professor [C.] Smith: Some general observations on the country and its inhabitants, and an Appendix: containing the natural history of that part of the Kingdom of Congo through which the Zaire flows*. J Murray, London. Pp. 1–498. **(293)**
- Leach WE (1819) Entomostraca. *Dictionnaire des Sciences Naturelles*. Volume 14. Levrault & Schoell, Paris. Pp. 1–537.
- Leach WE (1824) Cirripedes. Supplement to the Fourth, Fifth and Sixth Editions of the *Encyclopaedia Britannica*. With Preliminary Dissertations on the History of Sciences. Supplement 3. Archibald Constable & Co., Edinburgh. Pp. 168–171.
- Leach WE (1825) A tabular view of the genera composing the Class Cirripedes, with descriptions of the species of *Otion*, *Cineras* and *Clytra*. *Zoological Journal*, 2(6) article XXIII: 208–215. **(294)**
- Lessona C & Tapparone-Canefri C (1874) Nota sulla *Macrocheira kaempferi* Sieb. e sopra una nuova sp. del gen. *Dichelaspis*. *Atti della Reale Accademia delle Scienze e Belle-Lettere di Napoli*, 9(2): 185–194. **(296)**
- Leung TY & Jones DS (2000) Barnacles (Cirripedia: Thoracica) from epibenthic substrata in the shallow offshore waters of Hong Kong. In: Morton BS (ed.) *Proceedings of the Tenth International Marine Biological Workshop: The Marine Flora and Fauna of Hong Kong and Southern China*, Hong Kong, 6–26 April 1998. Hong Kong University Press, Hong Kong. Pp. 105–127.
- Lewis JA (1985) A re-examination of *Balanus variegatus* Darwin (Cirripedia, Thoracica) from southern Australia. *Crustaceana*, 48(2): 117–132. **(297)**
- Linnaeus C (1758) *Systema naturae per regna tria naturae, secundum classes, ordines, genera, species, cum characteribus, differentiis, synonymis, locis*. Tomus I. Editio decima, reformata. Laurentii Salvii, Holmiae [= Stockholm], 823 pp. **(298)**
- Linnaeus C (1766) *Systema naturae per regna tria naturae*. Tomus I(1). Editio duodecima, reformata. Laurentii Salvii, Holmiae [= Stockholm], 532 pp.
- Linnaeus C (1767) *Systema naturae per regna tria naturae*. Tomus I(2). Editio duodecima, reformata. Laurentii Salvii, Holmiae [= Stockholm], 533–1237. **(299)**
- Li G & Liu C (1978) Studies on the chemical and physical characteristics of the primary cement of barnacle, *Balanus reticulatus*. *Oceanologia et Limnologia Sinica*, 9(2): 224–229. **(300)**
- Linzey P (1942) The balanomorph barnacles of the Kermadec Islands. *Transactions and Proceedings of the Royal Society of New Zealand*, 71: 279–281.
- Liu JH (1995) Field experiments of predation by muricid gastropods *Thais clavigera* and *Morula musiva* on the intertidal barnacle *Tetraclita squamosa* at Cape d'Aguilar, Hong Kong. *Asian Marine Biology*, 12: 11–17. **(301)**
- Liu JH & Lu L (1995) Occurrence of the barnacle *Balanus amphitrite* Darwin on the shells of the predatory gastropod *Thais clavigera* Küster at Cape D'Aguilar, Hong Kong. *Asian Marine Biology*, 12: 69–78. **(302)**
- Liu JY & Ren X (2007) *Crustacea Cirripedia Thoracica*. *Fauna Sinica: Invertebrata*, 42. Science Press, Beijing, China, pp. i–xv, 1–633, figs. 236.
- Liu JY & Ren X (1985) *Studies in Chinese Cirripedia (Crustacea)*. VI. Suborder Lepadomorpha. *Studia Marina Sinica*, 25: 179–281. **(303)**
- Longhurst, AR (1958) *An ecological survey of the West African marine benthos*. Colonial Office Fisheries Publications, 11: 1–102. **(305)**
- Luckens PA (1968) The breeding and settlement of *Chthamalus challengerii* Hoek at Asamushi during 1967. *Bulletin of the Asamushi Marine Biological Station, Tohoku University*, 13(2): 75–82. **(306)**
- Luckens PA (1970a) Predation and intertidal zonation at Asamushi. *Bulletin of the Asamushi Marine Biological Station, Tohoku University*, 14(1): 33–52. **(307)**
- Luckens PA (1970b) Seasonal distributional variation within a limited shore area at Asamushi. *Scientific Reports, Tohoku University, series 4, Biology*, 35(2–3): 161–170. **(308)**
- Lund NT (1793) *Slaegten Scyllarus*. *Jagttagelser til Insekternes Historie*. I. Kongliga dansk Videnskabelige Selskabet Skrifter (new series) 2(2): 17–22.
- MacDonald JD (1869) On an apparently new genus of minute parasitic cirripede between *Lepas* and *Dichelaspis*. *Proceedings of the Zoological Society of London*, 1869: 440–444. **(309a)**
- MacDonald R (1929) A report on some cirripeds collected by the SS Albatross in the Eastern Pacific during 1891 and 1904. *Bulletin of the Museum of Comparative Zoology*, 69(15): 525–538. **(309b)**
- Mawatari S (1967) Biological studies of fouling in Japanese harbours. I. General concepts of researches. *Miscellaneous Reports of the Research Institute of Natural Resources*, 69: 87–114. **(310)**
- Mawatari S, Kitamura H, Inuba M & Hosaka K (1962) Biological approach to the water conduit fouling in littoral industrial districts along the coast of Japan, 1. *Miscellaneous Reports of the Research Institute of Natural Resources*, 52–59: 89–115. **(311)**
- Mawatari S, Kitamura H, Inuba M & Hosaka K (1963) Biological approach to the water conduit fouling in littoral industrial districts along the coast of Japan, 2. *Miscellaneous Reports of the Research Institute of Natural Resources*, 60: 93–104. **(312)**
- Mawatari S, Kitamura H & Kawashima Y (1968) Propagation of invaded barnacles by ships. *Proceedings of the Japanese Society of Systematic Zoology*, 4: 24–30. **(313)**
- McDougall KD (1943) *Sessile marine invertebrates of Beaufort, North Carolina*. *Ecological Monographs*, 13(3): 321–374. **(314)**
- McLaughlin PA & Henry DP (1972) Comparative morphology of complementary males in four species of *Balanus* (Cirripedia Thoracica). *Crustaceana*, 22(1): 13–30. **(315)**
- Memmi M (1982) Revision of the species *Lepas anatifera* (Crustacea, Cirripedia). *Zoologicheskii Zhurnal*, 61(8): 1165–1170.
- Menesini E (1966) I Balani Miocenici delle "Arenarie de Ponsano" (Volterra, Provincia de Pisa). *Palaeontographica Italica*, 60: 99–129. **(316)**
- Miers EJ (1876) *Catalogue of the Stalk- and Sessile-eyed Crustacea of New Zealand*. EW Janson, London, 36 pp.
- Miers EJ (1879) On a collection of Crustacea made by Captain HC St John, RN, in the Korean and Japanese seas. With an appendix by Captain HC St John. Part 1. Podophthalmia. *Proceedings*

- of the Zoological Society of London, 1879: 18–61, pls. 1–3.
- Miers EJ (1886) Report on the Brachyura collected by HMS Challenger during the Years 1873–76. Report on the Scientific Results of the Voyage of HMS Challenger 1873–76, Zoology, 17(49): i–xliv, 1–362, pls. 1–29.
- Millard N (1950) On a collection of sessile barnacles from Knysna Estuary, South Africa. Transactions of the Royal Society of South Africa, 32(3): 265–273. **(317)**
- Milne-Edwards A (1861) Études zoologiques sur les Crustacés récents de la famille des Portuniens. Archives du Muséum d'Histoire naturelle, Paris, 10: 309–428, pls. 28–38.
- Milne-Edwards A (1879) Sur un isopode gigantesque des grandes profondeurs de la mer. Comptes Rendu de l'Académie Scientifique, Paris, 88: 21–23.
- Milne Edwards H (1834) Histoire naturelle des Crustacés, comprenant l'anatomie, la physiologie et la classification de ces Animaux. Volume 1. Librairie encyclopédique de Roret, Paris pp. xxxv, 1–468.
- Milne Edwards H (1837) Histoire naturelle des Crustacés, comprenant l'anatomie, la physiologie et la classification de ces Animaux. Volume 1. Librairie encyclopédique de Roret, Paris, pp. 1–532, Atlas pp. 1–32, pls. 1–42.
- Milne Edwards H & Haime J (1851) Recherches sur les polypiers. Mémoire 6. Monographie des Fongides. Annales des Sciences naturelles, Série 3, 15: 73–144.
- Milne Edwards H (1857) Histoire naturelle des Coralliaires ou Polypes Proprement Dits. Volume 1. Librairie Encyclopédique de Roret, Paris, pp. 326.
- Milne Edwards H & Haime J (1860) Histoire naturelle des coralliaires ou polypes proprement dits. Volume 3. Librairie Encyclopédique de Roret, Paris, pp. 1–560.
- Monod T (1922) Sur un *Dichelaspis* de Madagascar, commensal de *Scylla serrata* (Forskål). Bulletin de la Société Zoologique de France, 47(1): 264–268. **(318)**
- Monod, T (1976) Expédition Rumphius II (1975). Crustacés parasites, commensaux, etc. Monod T & Serène R. (eds.) II. Cirripedia Thoracic: Lepadomorpha. Bulletin du Muséum national d'Histoire naturelle, Paris, 3<sup>e</sup> série, No. 391, Juillet-Aout 1976, Zoologie, 273: 845–851. **(319)**
- Monod T (1979) Crustacés associés à un Antipathaire des Îles Marquises. Cahiers de l'Indo-Pacifique, 1(1): 1–23. **(320)**
- Moore LB (1944) Some intertidal sessile barnacles of New Zealand. Transactions of the Royal Society of New Zealand, 73(4): 315–334, pls. 46, 47. **(321)**
- Mörch OAL (1852) Catalogus Conchyliorum quae Teliquit D. Alphonso d'Aguirra & Gadea, Comes de Yoldi, Regis Daniae Cubiculariorum Princeps, Ordinis Dannebrogici in prima Classe et Ordinis Caroli Terth Eques. Fasciculus primus, Cephalophora, pp. 170 [1852]; Fasciculus secundus Acephala, Annulata Cirripedia, Echinodermata, 74 pp. L. Klein, Hafniae. [= Copenhagen] [Cirripedia pp. 65–68] **(322)**
- Mori K (1990) Larval release, settlement and recruitment of a barnacle *Chthamalus challengeri*. La Mer, Société franco-japonaise d'océanographie, Tokyo, 28: 180–187. **(323)**
- Mori K & Tanaka M (1989) Intertidal community structure and environmental conditions of exposed and sheltered rocky shores in Amakusa, Japan. Publications from the Amakusa Marine Biology, Kyushu University, 10(1): 41–64. **(324)**
- Mori K, Tanaka M & Nishihama S (1985a) Community structure of a rocky shore in Tsuji-shima Island, Amakusa. II. Vertical distribution of dominant species and its zonation pattern. Publications from the Amakusa Marine Biology, Kyushu University, 8(1): 27–41. **(325)**
- Mori K, Tanaka M & Nishihama S (1985b) Community structure of a rocky shore in Tsuji-shima Island, Amakusa. III. The analysis of relationships between distributions of organisms and microtopographical conditions, using small quadrat. Publications from the Amakusa Marine Biology, Kyushu University, 8(1): 43–63. **(326)**
- Mortensen T (1927) Contributions to the Biology of the Philippine Archipelago and adjacent regions. Report on the Echinoidea collected by the United States Fisheries Steamer ALBATROSS during the Philippine Expedition, 1907–1910. Part I. The Cidaridae. Bulletin of the United States National Museum, 100, 6(4): 239–312; 22 figs, 32 pls.
- Mortensen T (1928) A Monograph of the Echinoidea. I. Cidaroida. CA Reitzel & Oxford University Press, Copenhagen & London, pp. 1–551, figs. 173, pls. 88.
- Morton B & Morton J (1983) The seashore ecology of Hong Kong. Hong Kong University Press, 350 pp. **(329)**
- Morton J (1973) The intertidal ecology of the British Solomon Islands. I. The zonation patterns of the weathered coasts. Philosophical Transactions of the Royal Society of London, series B, Biology, 265 (873): 491–542. **(330)**
- Müller F (1867) Über *Balanus armatus* und einen Bastard dieser Art und des *Balanus improvisus* var. *assimilis*. Darwin. Archiv für Naturgeschichte, Jahrbücher 33: 329–356. Berlin.
- Müller F (1868) On *Balanus armatus* and a hybrid between this species and *Balanus improvisus* var. *assimilis*, Darwin. Annals and Magazine of Natural History, series 4, 4(1): 393–412.
- Müller OF (1776) Zoologicae Danicae prodromus, seu Animalium Daniae et Norvegiae indigenarum; characteres, nomina, et synonyma imprimis popularium. Typis Hallageriis, Hafniae. [= Copenhagen]; pp. i–xxxii, 1–282.
- Münter J & Buchholz R (1869) Über *Balanus improvisus* Darw., var. *gryphicus* Münter, Beitrag zur carcinologischen Fauna Deutschlands. Teil 1 und 2. Mitteilungen aus dem Naturwissenschaftlichen Verein von Neuvorpommern und Rügen, pp. 1–40.
- Nakamura R & Tanaka M (1989) Clumps of the stalked barnacle *Capitulum mitella* as habitats for intertidal animals. Publications from the Amakusa Marine Biology, Kyushu University, 10(1): 65–77. **(331)**
- Neu W (1935) *Balanus eburneus* Gould und *Balanus improvisus* Darwin als Bewuchs ausgehängter Platten im Goldenem Horn von Isatanbul. Zoologischer Anzeiger, 112: 92–95.
- Newman WA (1960a) Five pedunculate cirripeds from the Western Pacific, including two new forms. Crustaceana, 1(1): 100–116. **(333)**
- Newman WA (1960b) *Octolasmis californiana* sp. n., a pedunculate barnacle from the gills of the Californian spring lobster. Veliger, 3(1): 9–11. **(334)**
- Newman WA (1961a) On the nature of the basis in certain species of the *Hembei* section of *Chthamalus* (Cirripedia, Thoracica). Crustaceana, 2(2): 142–150. **(335)**
- Newman WA (1961b) Notes on certain species of *Octolasmis* (Cirripedia, Thoracica) from deep sea crustacea. Crustaceana, 2: 326–329. **(336)**
- Newman WA (1972) Lepadids from the Caroline Islands (Cirripedia Thoracica). Crustaceana, 22: 31–38. **(338)**
- Newman WA (1973) An oxynaspid (Cirripedia, Thoracica) from the eastern Pacific. Crustaceana, 23: 202–208, figs. 1, 2. **(339)**
- Newman WA (1979a) On the biogeography of balanomorph barnacles of the southern ocean including two new balanid taxa: a subfamily, two genera and three species. In: Proceedings of the International Symposium on Marine Biogeography and Evolution in the Southern Hemisphere. University of Auckland, New Zealand, July 14–29, 1978. New Zealand Department of Scientific Industrial Research Information, Series 137. Wellington, New Zealand, pp. 1: 279–306. **(340)**
- Newman WA (1979b) A new scalpellid (Cirripedia); a Mesozoic relic living near an abyssal hydrothermal spring. Transactions of the San Diego Society of Natural History, 19(11): 153–167.

- Newman WA (1982) A review of extant taxa of the 'Group of *Balanus concavus*' (Cirripedia; Thoracica) and a proposal for genus-group ranks. *Crustaceana*, 43(1): 25–36.
- Newman WA (1987) Evolution of cirripedes and their major groups. In: Southward AJ (ed.) *Barnacle Biology*. *Crustacean Issues* 5. AA Balkema, Rotterdam. Pp. 3–42. **(341)**
- Newman WA (1993) Darwin and cirripedology. In: Truesdale J (ed.) *The History of Carcinology*. *Crustacean Issues*, 8. AA Balkema, Rotterdam. Pp. 349–434. **(342)**
- Newman WA (1996) *Sous-Classes des Cirripèdes (Cirripedia Burmeister, 1834) Superordres des Thoraciques et des Acrothoraciques (Thoracica Darwin, 1854 – Acrothoracica Gruvel, 1905)*. In: Forest J (ed.) *Traité de Zoologie, Anatomie, Systématique, Biologie, 7, Crustacés, Fasciculus 2, Généralités (suite) et Systématique*. Masson, Paris. Pp. 453–540. **(343)**
- Newman WA & Ross A (1971) Antarctic Cirripedia. Antarctic Research Series, 14. American Geophysical Union. 257 pp. **(344)**
- Newman WA & A. Ross A (1976) Revision of the balanomorph barnacles; including a catalogue of the species. *Memoirs of the San Diego Society of Natural History*, 9: 1–108. **(345)**
- Newman WA & Ross A (2001) Prospectus on larval cirriped setation formulae, revisited. *Journal of Crustacean Biology*, 21(1): 56–77.
- Newman WA, Zullo VA & Withers TH (1969) Cirripedia. In: Moore RC (ed.) *Treatise of Invertebrate Palaeontology, Part R: Arthropoda 4(1)*. Geological Society of America and the University of Kansas, Lawrence, Kansas. Pp. R206–R295, figs. 1–119. **(346)**
- Ng PKL & Sivasothi N (eds) (2001) *A Guide to the Mangroves of Singapore. II (Animal Diversity)*. The Singapore Science Centre. 168 pp.\*
- Nilsson-Cantell CA (1921) Cirripeden–Studien zur kenntnis der biologie, anatomie und systematik dieser gruppe. *Zoogiska bidrag fran Uppsala*, 7: 75–404. **(347)**
- Nilsson-Cantell CA (1925) Nueu und wenig bekannte Cirripeden aus den Museen zu Stockholm und zu Upsala. *Arkiv for Zoologie*, 18A(3): 1–46. **(348)**
- Nilsson-Cantell CA (1927) Some barnacles in the British Museum (Natural History). *Proceedings of the Zoological Society of London*, part 3: 743–790. **(349)**
- Nilsson-Cantell CA (1928) Studies on cirripeds in the British Museum (Natural History). *Annals and Magazine of Natural History*, 10(2): 1–39. **(350)**
- Nilsson-Cantell CA (1929a) Two species of *Balanus* very little known since the Darwinian Monograph of Cirripedia was issued. *Arkiv for Zoologie*, 20A(14): 1–7. **(351)**
- Nilsson-Cantell CA (1929b) Cirripeden des Genus *Verruca* der Deutschen Tiefsee– Expedition auf dem Dampfer "Valdiva" 1898–1899. *Zoologische Jahrbücher Abteilung fur Systematik, Okologie und Geographie der tier*, 58(4): 459–480. **(352)**
- Nilsson-Cantell CA (1930a) Diagnoses of some new cirripedes from the Netherlands Indies collected by the expedition of His Royal Highness the Prince Leopold of Belgium in 1929. *Bulletin de Musée royal d'Histoire naturelle de Belgique*, 6(4): 1–2. **(353)**
- Nilsson-Cantell CA (1930b) Résultats Scientifiques du Voyage aux Indes Orientales Neerlandaises de LL AA RR le Prince et la Princesse Léopold de Belgique. *Mémoires de Musée royal d'Histoire naturelle de Belgique*, 3(3): 1–24. **(354)**
- Nilsson-Cantell CA (1930c) Thoracic cirripedes collected in 1925–1927. *Discovery Reports*, 2: 223–260. **(355)**
- Nilsson-Cantell CA (1930d) Cirripeden von der Stewart Insel und von Sudgeorgien. *Senckenbergiana*, 12: 210–213. **(356)**
- Nilsson-Cantell CA (1931a) Revision der Sammlung recenter Cirripeden des Naturhistorischen Museums in Basel. *Verhandlungen der Naturforschenden Gesellschaft in Basel*, 42: 103–137. **(357)**
- Nilsson-Cantell CA (1931b) Cirripeds from the Indian Ocean and Malay Archipelago in the British Museum (Natural History). *London. Arkiv for Zoologie*, 23A(18): 1–12. **(358)**
- Nilsson-Cantell CA (1932a) Cirripeden aus Japan, gesammelt von Dr Smith, Dr Habener und Dr. Hilgendorf, in dem Berliner Museum aufbewahrt. *Arkiv for Zoologie*, 24A(4): 1–29, 1 pl. **(359)**
- Nilsson-Cantell CA (1932b) Neue Balaniden aus Süd- und Ost-Afrika in dem Berliner Museum. *Arkiv for Zoologie*, 24A(6): 1–18. **(360)**
- Nilsson-Cantell CA (1932c) Cirripèdes (Additional Part). Résultats scientifiques du voyage aux Indes Orientales Neerlandaises de LL AA RR le Prince et la Princesse Leopold de Belgique. *Mémoires de Musée royal d'Histoire naturelle de Belgique (hors séries)*, 3(10): 3–8. **(361)**
- Nilsson-Cantell CA (1932d) The barnacles *Stephanolepas* and *Chelonibia* from the turtle *Eretmochelys imbricata*. *Ceylon Journal of Science (B), Spolia Zeylanica*, 16: 257–264. **(362)**
- Nilsson-Cantell CA (1932e) Notes on some cirripeds from the voyage of HRH the Prince Leopold of Belgium to the Far East in the year 1932. *Bulletin de Musée royal d'Histoire naturelle de Belgique*, 8(33): 1–2. **(363)**
- Nilsson-Cantell CA (1932f) Revision der Sammlung recenter Cirripeden des Naturhistorischen Museums in Basel. *Verhandlungen der Naturforschenden Gesellschaft in Basel*, 42: 103–137, figs. 1–8, pl. 2.
- Nilsson-Cantell CA (1934a) Indo-Malayan cirripeds in the Raffles Museum, Singapore. *Bulletin of the Raffles Museum*, 9: 31–63. **(364)**
- Nilsson-Cantell CA (1934b) Cirripeds from the Malay Archipelago in the Zoological Museum of Amsterdam. *Zoologische Mededeelingen*, 17: 31–63. **(365)**
- Nilsson-Cantell CA (1937) On a second collection of Indo-Malayan cirripeds from the Raffles Museum. *Bulletin of the Raffles Museum*, 13: 93–96. **(367)**
- Nilsson-Cantell CA (1938a) Recent cirripeds from the Congo. *Revue de Zoologie et de Botanique Africaines*, 31(1): 175–181. **(371)**
- Nilsson-Cantell CA (1938b) Cirripedes from the Indian Ocean in the collection of the Indian Museum, Calcutta. *Memoirs of the Indian Museum*, 13(1): 1–81, 28 figs, 3 pls. **(372)**
- Nilsson-Cantell CA (1939c) Thoracic cirripedes collected in 1925–1936. *Discovery Reports*, 18: 223–238. **(373)**
- Nilsson-Cantell CA (1955) Cirripedia. Reports of the Swedish Deep-Sea Expedition. II. *Zoology* 17: 215–220. **(374)**
- Nilsson-Cantell CA (1957) Reports of The Lund University Chile expedition 1948–49. 31. Thoracic cirripeds from Chile, *Lunds Universitets Arsskriften Ny Foljd Avdelningen, series 2*, 53(9). CWK Gleerup, Lund, pp. 25. **(375)**
- Nishikawa S (1960) Chromosomes of *Balanus amphitrite albicostatus* Pilsbry. *Zoological Magazine Tokyo*, 69(12): 355–356. **(376)**
- Nomura S (1938) A note on some fossils from the Ryukyu Islands. *Biogeographica*, 3(1): 87–91. **(377)**
- Ogawa K (2000) Coral-inhabiting barnacles (Cirripedia: Pyrgomatidae) from west coast of Babeldaob Island of the Republic of Palau. *Biogeography*, 2: 29–43.
- Ogawa K & Matsuzaki K (1990) Revision of the coral inhabiting barnacles in Japan – preliminary note. *Nanki-seibutu: The Nanki Biological Society*, 32(2): 73–79.
- Ogawa K, Pillay R. & Kawasaki H (1998) Coral-inhabiting barnacles (Cirripedia: Pyrgomatidae) from Albion, west coast of Republic of Mauritius. *Bulletin of the Biogeographical Society of Japan*, 53: 1–21.
- Oken L (1815–1816) *Lehrbuch der Naturgeschichte*. Dritter Thiel. Zoologie, Erste Abteilung, Fleischlose Thiere. A. Schmid & Company, Jena, pp. 1–841 [Register, published 1815]; Atlas I–IV, pls. I–XVII [published 1816].

- Olfers JF (1814) Der *Gesellschaft* naturforschender Freunde zu Berlin, Magazin für die neuesten Entdeckungen in der gesammten Naturkunde, Jahrgang VIII, drittes Quartal, 1814: 177. (378)
- Oliviera LPH de (1941) Contribuicao ao conhecimento dos crustaceos do Rio de Janeiro, subordem 'Balanomorpha' (Cirripedia, Thoracica). Memoirs of the Institute Oswaldo Cruz, 36(1): 1–31. text fig. 1, pls. 1–11. (379)
- O'Riordan CE (1967) Cirripedes in Ireland. Proceedings of the Royal Irish Academy, section B, , 65(10): 285–296. (381)
- Ørvig T (1958) *Pycnaspis splendens*, new genus, new species, a new ostracoderm from the Upper Ordovician of North America. Proceedings of the United States National Museum, 108 (3391): 1–23.
- Otter GW (1937) Rock destroying organisms in relation to coral reefs. Scientific Reports of the Great Barrier Reef Expedition, 1: 323–352. (382)
- Owen R (1830) Catalogue of the contents of the Museum of the Royal College of Surgeons Part IV. Fasciculus I. Comprehending the first division of the preparations of Natural History in spirit. Catalogue of the Museum of the Royal College of Surgeons, Invertebrates, 1: 1–44. (383)
- Pallas PS (1766) Elenchus zoophytorum sistens generum adumbrationes generiores et specierum cognitarum succinctas descriptiones cum selectis auctorum synonymis. Fransiscum Varrentrapp, Hagae Comitum [The Hague, Netherlands], pp. 1–451.
- Parisi B (1915) I Decapodi giapponesi del Museo di Milano. II. Dromiacea. Atti della Societa Italiana di Scienze Naturali e del Museo Civico di Storia Naturale di Milano, 54: 102–116, figs. 1–2, pls. 2–3.
- Pearse AS (1947) Observations on the occurrence of certain barnacles and isopods at Beaufort, North Carolina. Journal of the Washington Academy of Sciences, 37(9): 325–328. (384)
- Pearse AS (1951) Parasitic Crustacea from Bimini, Bahamas. Proceedings of the United States National Museum, 101: 341–372.
- Pearse AS (1952) Parasitic Crustacea from the Texas coast. Publications of the Institute of Marine Science, 2(2): 7–42. (385)
- Pérez-Losada MJ, Høeg JT & Crandall KA (2004) Unraveling the evolutionary radiation of the thoracican barnacles using molecular and morphological evidence: A comparison of several divergence time estimation approaches. Systematic Biology, 53(2): 244–264.
- Pérez-Losada MJ, Harp M, Høeg JT, Achituv Y, Jones DS, Watanabe H & Crandall KA (2008) The tempo and mode of barnacle evolution. Molecular Phylogenetics & Evolution, 46: 328–346.
- Pérez-Losada MJ, Høeg JT, Crandall KA & Achituv Y (2012) Molecular phylogeny and character evolution of the chthamaloid barnacles. Molecular Phylogenetics & Evolution, 65: 329–334.
- Perreault R (2014) *Galkinius* nom. nov., replacement name for *Galkinia* Ross & Newman, 1995. Zootaxa, 3847(3): 450–450.
- Perry G (1811) Conchology, or, The natural history of shells containing a new arrangement of the genera and species, illustrated by coloured engravings, executed from the natural specimens, and including the latest discoveries. W Miller, London, no pagination, pls. 61.
- Philippi RA (1836) Cirripedia. In: Enumeratio molluscorum Siciliae cum viventium tum in tellure tertiaria fossilium, quae in itinere suo observavit. Volume 1. Schropp, Berolini [= Berlin], pp. xiv + 267, pls. 1–12.
- Philippi A (1844) Enumeratio molluscorum Siciliae cum viventium tum in tellure tertiaria fossilium, quae in itinere suo observavit. Volume secundum continens addenda et emendanda, nec non comparationem faunae recentis Siciliae cum faunis aliarum terrarum et com fauna periodi tertiariae. Eduard Anton, Halis Saxonom [= Halle], pp. iv + 303.
- Philippi RA (1887) Die Tertiären und Quartären Versteinerungen, Chiles. Fosiles Terciarios y Cuartarios de Chile. FA Brockhaus, Leipzig, 256 pp.
- Pichon M (1972) The coral reefs of Madagascar, In: Battistine R & Richard-Vindard G (eds.) Biogeography and Ecology in Madagascar. Dr W Junk, BV Publishers, The Hague. Pp. 367–410. (387)
- Pilsbry HA (1890a) Description of *Scalpellum stearnsii* sp. nov. The Nautilus, 4: 96. (388)
- Pilsbry HA (1890b) Description of a new Japanese *Scalpellum*. Proceedings of the Academy of Natural Sciences, Philadelphia, 42: 441–443. (389)
- Pilsbry HA (1896) On a collection of barnacles. Proceedings of the Academy of Natural Sciences, Philadelphia, 48: 208. (390)
- Pilsbry HA (1907a) The barnacles (Cirripedia) contained in the collections of the United States National Museum. Bulletin of the United States National Museum, 60: 1–122. (392)
- Pilsbry HA (1907b) Notes on some Pacific cirripedes. Proceedings of the Academy of Natural Sciences, Philadelphia, 59: 360–362. (393)
- Pilsbry HA (1907c) Cirripedia from the Pacific coast of North America. Bulletin of the United States Bureau of Fisheries, Washington, 26(617): 193–204. (395)
- Pilsbry HA (1907d) Hawaiian Cirripedia. Cirripedia from the Pacific Coast of North America. Bulletin of the United States Bureau of Fisheries, Washington, XXVI (No. 617): 179–204, figs. 1–4, pls. 6–11. (396)
- Pilsbry HA (1907e) Notes on the cirripede genus *Megalasma*. Proceedings of the Academy of Natural Sciences, Philadelphia, LIX: 408. (397)
- Pilsbry HA (1908) On the classification of scalpelliform barnacles. Proceedings of the Academy of Natural Sciences, Philadelphia, 60: 104–111, fig. 1. (398)
- Pilsbry HA (1910) *Stomatolepas*, a barnacle commensal in the throat of the loggerhead turtle. American Naturalist, 44: 304–306. (399)
- Pilsbry HA (1911a) Barnacles of Japan and Bering Sea. Bulletin of the United States Bureau of Fisheries, Washington, XXIX, 1909, 739: 61–84, pls. VIII–XVII. (400)
- Pilsbry HA (1911b) Remarks on new cirripedes. Proceedings of the Academy of Natural Sciences, Philadelphia, 63: 170–173. (401)
- Pilsbry HA (1912) Diagnoses of new barnacles from the Philippine Archipelago and China Sea. Proceedings of the United States National Museum, 42(1902): 291–294. (402)
- Pilsbry HA (1916) The sessile barnacles (Cirripedia) contained in the collections of the United States National Museum; including a monograph of the American species. Bulletin of the United States National Museum, 93: 1–366. (403)
- Pilsbry HA (1918) Cirripedia from the Panama Canal Zone. Contributions to the geology and palaeontology of the Canal Zone, Panama, and geologically related areas in Central America and the West Indies. Bulletin of the United States National Museum, 103: 185–188. (404)
- Pilsbry HA (1927) Cirripedia of Curaçao. Bijdrage tot de dierkunde 25: 37–38, figs. 1–3. Amsterdam.
- Pilsbry HA (1928) Littoral barnacles of the Hawaiian Islands and Japan. Proceedings of the Academy of Natural Sciences, Philadelphia, 79: 305–317. (406)
- Pilsbry HA (1953) Notes on Floridan barnacles (Cirripedia). Proceedings of the Academy of Natural Sciences, Philadelphia, 105: 13–28 pls. 1, 2 figs. 1–5. (408)
- Pilsbry HA & Olsen AA (1951) Tertiary and Cretaceous Cirripedia from north-western South America. Proceedings of the Academy of Natural Sciences, Philadelphia, 103: 197–210. (409)
- Pitombo FB (2004) Phylogenetic analysis of the Balanidae (Cirripedia: Balanomorpha). Zoologica Scripta, 33(3): 261–276.
- Poli GS 1791 Testacea utriusque Siciliae eorumque historia et anatome tabulis aeneis illustrata. Tomus 1. Ex Regio Typographeio, Parmae, pp. 1–73.



- Poli GS (1795) Testacea utriusque Siciliae eorumque historia et anatomicae tabulis aeneis illustrata. Tomus 2. Ex Regio Typographeio, Parmae. Pp. 75–264. **(410)**
- Poltarukha OP (1997a) Composition, phylogeny, and position in the subfamily Euraphiinae (Crustacea, Chthamalidae) in the system of Cirripedia. *Russian Journal of Zoology*, 1(4): 463–470.
- Poltarukha OP (1997b) Composition, phylogeny, and position of the subfamily Euraphiinae (Crustacea, Chthamalidae). *Zoologicheskii Zhurnal*, 76(10): 1109–1117.
- Poltarukha OP (2001) Materials on the variability and taxonomic status of *Chthamalus malayensis* Pilsbry, 1916 and *Chthamalus moro* Pilsbry, 1916 (Crustacea, Cirripedia, Chthamalidae) inhabiting the littoral of southern Vietnam. *Zoologicheskii Zhurnal*, 80(2): 155–164. [in Russian]
- Poltarukha OP & Dautova TN (2007) Barnacles (Cirripedia, Thoracica) of Nhatrang Bay. In: Britayev TA & Pavlov DS. (eds.) Benthic Fauna of the Bay of Nhatrang, Southern Vietnam. KMK Scientific Press Ltd, Moscow, pp. 249, pls. 103, b/w figs. 102.
- Poltarukha OP & Zvyagintsov AY (2008) The barnacles (Cirripedia, Thoracica) of Vietnam and their role in the fouling communities. Russian Academy of Sciences. KMK Scientific Press Ltd, Moscow, 335 pp., figs. 1–112, pls. 1–6.
- Pope EC (1945) A simplified key to the sessile barnacles found on rocks, boats, wharf piles and other installations in Port Jackson and adjacent waters. *Records of the Australian Museum*, 21(6): 351–372. **(411)**
- Pope EC (1965) A review of Australian and some Indomalayan Chthamalidae (Crustacea, Cirripedia). *Proceedings of the Linnean Society of New South Wales*, 90(1): 10–77. **(412)**
- Pope EC (1966) Sessile barnacles (Thoracica, Cirripedia). *Port Phillip Survey, 1957–1963. Memoirs of the National Museum, Melbourne*, 27: 179–182.
- Prawoto RE & Yamaguchi T (2005) A new mangrove barnacle of the genus *Fistulobalanus* (Cirripedia: Amphibalaninae) from Sumbawa Island, Indonesia. *Journal of the Marine Biological Association of the United Kingdom*, 85: 929–936.
- Prem-Kumar VK & Daniel A (1968) A new species of operculate barnacle of the subgenus *Membranobalanus* (Cirripedia, Thoracica) from sponges in the Indian seas. *Crustaceana*, 14(2): 147–150. **(413)**
- Pulteney R (1799) Catalogues of the birds, shells and some of the more rare plants of Dorsetshire. From the new and enlarged edition of Mr Hutchins' history of that county. Folio. Edition 1. Nicholls, London. [Edition 2, 1813], pp. [1], 1–92.
- Purchon RD & Enoch I (1954) Zonation of the marine fauna and flora on a rocky shore near Singapore. *Bulletin of the Raffles Museum*, 25: 47–65. **\*(414)**
- Puspasari IA, Yamaguchi T & Angsupanich S (2000) Re-examination of a little-known mangrove barnacle, *Balanus patelliformis* Brugière (Cirripedia, Thoracica) from the Indo-West Pacific. *Sessile Organisms*, 16(2): 1–13.
- Puspasari IA, Yamaguchi T & Kojima S (2001b) Phylogeny of the *Balanus amphitrite* complex occurring in Japan (Cirripedia: Balanidae) inferred from mitochondrial COI gene and morphology. *Sessile Organisms*, 18(1): 7–17.
- Puspasari IA, Yamaguchi T & Ross A (2002) New record of *Balanus zhujiangensis* (Cirripedia, Balanidae) from Okinawa, Japan. *Journal of Crustacean Biology*, 22(2): 235–240.
- Quelch JJ (1886) Report on the reef-corals collected by HMS Challenger during the years 1873–76. *Reports of the Scientific Results of the Voyage of HMS Challenger*, Zoology, 16(3): 1–203, pls. 1–12.
- Quoy JRE & Gaimard JP (1827) Observations zoologiques faites à bord de l'Astrolabe, en mai 1826, dans le détroit de Gibraltar (suite et fins). *Annales des Sciences naturelles (Zoologie)*, 1(X): 227–239.
- Quoy JRE & Gaimard JP (1834) Voyage de découvertes de l'Astrolabe, exécuté par ordre du Roi pendant les années 1826–1829, sous le Commandement de M.J. Dumont d'Urville. *Zoologie*, Volume 9, Part 3, Mollusques: 627–643. J Tatsu, Paris. [4 volumes] **(415)**
- Raimondi PT (1992) Adult plasticity and rapid larval evolution in recent isolated barnacle population. *Biological Bulletin*, 182: 210–220.
- Rainbow PS, Green J & Denny P (1989) A note on the intertidal ecology of two little known barnacles *Balanus kondikovi* Tarasov & Zevina, 1957, and *Balanus patelliformis* Brugière, 1789, from a Malasian mangrove swamp (Cirripedia, Balanomorpha). *Crustaceana*, 57(1): 104–107. **(416)**
- Rainbow PS, Huang Z, Yan S & Smith B (1993) Barnacles as biomonitors of trace metals in the coastal waters near Xiamen, China. *Asian Marine Biology*, 10: 109–121. **(417)**
- Ranzani C (1817–1818) Osservazioni su i Balanidi. *Opuscoli Scientifici*. Bologna. I (1817), pp. 195–202; II (1817), pp. 269–276; III (1818), pp. 63–93. **(419)**
- Ranzani C (1820) Osservazioni su i Balanidi. *Memoire di Storia Naturales, varie specie di Crustacei, Molluschi, ec. Deca prima*. Bologna, pp. 13–57.
- Rathbun MJ (1923) An analysis of “*Dromia dromia* (Linnaeus)”. *Proceedings of the Biological Society, Washington*, 36: 65–70.
- Reeve LA (1842) *Conchologia Systematica or Complete System of Conchology: in which the Lepades and Conchiferous Mollusca are described and classified according to their natural organization and habits*. Volume 2. Longman, Brown, Green & Longmans, London. 337 pp., pls. 131–300.
- Rehberg H (1892) Neue und wenig bekannte Korallen. *Abhandlungen Naturwissenschaftlichen Verein zu Hamburg*, 12: 1–50.
- Reinhard, JT (1850) Om Slaegten Lithotryas Evne til at bore sig ind Steenblokke. *Videnskabelige Meddelelser fra dansk naturhistorisk Forening i Kjobenhavn*, 1: 1–8. **(420)**
- (421)** Relini G (1968) Segnalazione di due Cirripedi Nouvi per l'Adriatico. *Bolletino de Societie du Adriatica Scientia Trieste*, 56(2): 218–225.
- Relini G (1969) La distribuzione dei Cirripedi Toracici nei mari Italiani. *Archivio Botanico e Biogeografico Italiano*, series 4, 45(4): 168–186. **(422)**
- Ren X (1980) A new species of *Tetrachthamalus* (Cirripedia: Chthamalidae) from South China Sea. *Oceanologia et Limnologia Sinica*, 11(2): 150–153.
- Ren X (1980b) Turtle barnacles of the Xisha islands, Guangdong Province, China. *Studia Marina Sinica*, 17: 187–197, pls. 2. **(424)**
- Ren X (1984a) Studies on Chinese Cirripedia (Crustacea). III. Family Chthamalidae. *Studia Marina Sinica*, 22(12): 145–161. **(426)**
- Ren X (1984b) Studies on Chinese Cirripedia (Crustacea). IV. Family Verrucidae. *Studia Marina Sinica*, 23(9): 165–178. **(427)**
- Ren X (1984c) Studies on Chinese Cirripedia (Crustacea). V. Genus *Acasta*. *Studia Marina Sinica*, 23(9): 183–210. **(428)**
- Ren X (1986) Studies on Chinese Cirripedia (Crustacea). VII. Family Pyrgomatidae. *Studia Marina Sinica*, 26(7): 129–153. **(429)**
- Ren X (1987a) Studies on Chinese Cirripedia (Crustacea). VIII. Supplementary Report. *Studia Marina Sinica*, 28(10): 175–186. **(430)**
- Ren X (1987b) A short report on the Cirripedia (Crustacea) from the Nansha Islands. *Studia Marina Sinica*, 28(10): 190–192. **(431)**
- Ren X (1989a) Two new species and one new record of Cirripedia Thoracica from South China Sea. *Institute of Oceanology, Academia Sinica, Qingdao*, 20(5): 466–473. **(432)**
- Ren X (1989b) On a collection of Cirripedia Thoracica from Madagascar and adjacent waters. *Bulletin du Muséum National d'Histoire Naturelle, Paris*, 11(2): 431–468. **(433)**
- Ren X & Liu JY (1978) Studies on Chinese Cirripedia (Crustacea). I. Genus *Balanus*. *Studia Marina Sinica*, 13: 119–196. **(434)**

- Ren X & Lui R (1979) Studies on Chinese Cirripedia (Crustacea). II. Family Tetracitidae. *Oceanologia et Limnologia Sinica*, 10(4): 338–353. **(435)**
- Reynolds TV, Matthee CA & von der Heyden S (2014) The influence of Pleistocene climatic changes and ocean currents on the phylogeography of the southern African barnacle, *Tetracitella serrata* (Thoracica; Cirripedia). *PLoS ONE* 9(7): e102115. doi:10.1371/journal.pone.0102115.
- Richards HG (1930) Notes on barnacles from Cape May County, New Jersey. *Proceedings of the Academy of Natural Sciences, Philadelphia*, 82: 143–144. **(436)**
- Reid DG, Mason MJ, Chan BKK & Duer MJ (2012) Characterization of the phosphatic mineral of the barnacle *Ibla cumingi* at atomic level by solid-state nuclear magnetic resonance: comparison with other phosphatic biominerals. *Journal of the Royal Society Interface* 9(72): 1510–1516.
- Ritz DA & Foster BA (1968) Comparison of the temperature responses of barnacles from Britain, South Africa and New Zealand, with special reference to temperature acclimation in *Elminius modestus*. *Journal of the Marine Biological Association of the United Kingdom*, 48: 545–559. **(437)**
- Robertson R (1970) Review of the predators and parasites of stony corals with special reference to symbiotic prosobranch gastropods. *Pacific Science*, 24(1): 43–54. **(438)**
- Rogers F (1949) Three new subspecies of *Balanus amphitrite* from California. *Journal of Entomology & Zoology, Claremont College*, 41: 23–32, 1 pl. **(439)**
- Römer F & Schaudinn FR (1900) Fauna arctica, eine Zusammenstellung der arktischen Tierformea mit besonderer Berücksichtigung des Spitzbergen – Gebietes auf Grund der Ergebnisse der Deutschen Expedition in das Nörliche Eismeer in Jahre 1898. 6 volumes, 1900–1933. Römer F with Schaudinn FR & Arndt W.
- Rosell NC (1967) The Philippine Cirripedia Fauna 1. Some pedunculate Cirripeds from Iloilo waters and adjacent Seas. *University of the Philippines Natural and Applied Science Bulletin*, 20(4): 277–319. **(440)**
- Rosell NC (1972) Some barnacles (Cirripedia Thoracica) of Puerto Galera found in the vicinity of the University of the Philippines Marine Biological Laboratory. *University of the Philippines Natural and Applied Science Bulletin*, 24(4): 143–285. **(442)**
- Rosell N (1973b) Some thoracic barnacles (Crustacea: Cirripedia) of Manila Bay. *Kalikasan, Philippines Journal of Biology*, 2: 69–95. **(444)**
- Rosell NC (1975a) A new *Tetracitella* from the Philippines. *Crustaceana*, 28(1): 96–100. **(446)**
- Rosell N C (1975c) Two new species of barnacles (Cirripedia, Thoracica) from Mindanao, Philippines. *Publications of the Seto Marine Laboratory*, 22(1/4): 105–115, figs. 1–4. **(448)**
- Rosell NC (1981) Crustacea – Cirripedia. Résultats des Campagnes MUSORSTOM 1 – Philippines. 1976. 1. Mémoires ORSTOM 91: 277–307. **(449)**
- Rosell N C (1989) Thoracic Cirripeds from the MUSORSTOM 2 Expedition. In: Forest J (ed.) Résultats des Campagnes MUSORSTOM, Volume 5. Mémoires du Muséum national d'Histoire naturelle, (A), 144: 9–35. **(450)**
- Rosell N C (1991) Crustacea Cirripedia Thoracica: MUSORSTOM 3 Philippines collection. In: Crosnier A (ed.) Résultats des Campagnes MUSORSTOM, Volume 9. Mémoires du Muséum national d'Histoire naturelle, (A), 152: 9–61. **(451)**
- Ross A (1961) A new cirriped from the Hawaiian Islands. *Crustaceana*, 2(3): 209–212. **(452)**
- Ross A (1962) Results of the Puritan-American Museum of Natural History Expedition to western Mexico. Number 15. The littoral balanomorph Cirripedia. *American Museum Novitates*, 2084: 1–44. **(453)**
- Ross A (1963a) A new Pleistocene *Platylepas* from Florida. *Journal of the Florida Academy of Science*, 26(2): 150–158. **(454)**
- Ross A (1963b) *Chelonibia* in the Neogene of Florida. *Journal of the Florida Academy of Science*, 26(3): 221–223. **(455)**
- Ross A (1968) Bredin-Archbold-Smithsonian Biological Survey of Dominica. 8. The intertidal balanomorph Cirripedia. *Proceedings of the United States National Museum*, 125(3665): 1–32, figs. 1–3. **(456)**
- Ross A (1971) Studies on the Tetracitidae (Cirripedia Thoracica): A new *Tetracitella* from India. *Transactions of the San Diego Society for Natural History*, 16(8): 215–224, figs. 1–4. **(457)**
- Ross A (1972) Studies on the Tetracitidae (Cirripedia, Thoracica): On the recurrence of *T. karandei* in Taiwan. *Crustaceana*, 23(3): 307–308. **(458)**
- Ross A (1975) *Heteralepas cornuta* (Darwin) in the eastern Pacific abyssal fauna (Cirripedia, Thoracica). *Crustaceana*, 28(1): 17–20. **(459)**
- Ross A (1999) Notes on the coral-inhabiting barnacles of the Great Barrier Reef, Australia (Cirripedia: Pyrgomatidae). *Memoirs of the Queensland Museum*, 43(2): 833–836.
- Ross A & Jackson CG Jr (1972) Barnacle fouling of the ornate diamondback terrapin, *Malaclemys terrapin macrospilota*. *Crustaceana*, 22(2): 203–205. **(460)**
- Ross A & Newman WA (1967) Eocene Balanidae of Florida, including a new genus and species with a unique plan of “turtle barnacle” organisation. *American Museum Novitates*, 2288: 1–21, figs. 1–7. **(461)**
- Ross A & Newman WA (1973) Revision of the coral-inhabiting barnacles (Cirripedia : Balanidae). *Transactions of the San Diego Natural History Society*, 17(12): 136–173, figs. 1–25. **(462)**
- Ross A & Newman WA (1995) A coral-eating barnacle, revisited (Cirripedia; Pyrgomatidae). *Contributions to Zoology*, 653: 129–175. **(463)**
- Ross A & Newman WA (1996) A new sessile barnacle symbiotic with bryozoans from Madagascar and Mauritius (Cirripedia: Balanomorphia): a unique case of coevolution? *Invertebrate Biology*, 115(2): 150–161.
- Ross A & Newman WA (2000a) *Pyrgoma kuri* Hoek, 1913: a case study in morphology and systematics of a symbiotic coral barnacle (Cirripedia: Balanomorphia). *Contributions to Zoology*, 68(4): 245–260.
- Ross A. & Newman WA (2000b) A new coral-eating barnacle: the first record from the Great Barrier Reef, Australia. *Memoirs of the Queensland Museum*, 45(2): 585–592.
- Ross A & Perreault RT (1999) Revision of the Tetracitellinae and description of a new species of *Newmanella* Ross from the tropical western-Atlantic Ocean (Cirripedia: Tetracitoida). *Sessile Organisms*, 15(2): 1–8.
- Ross A & Pitombo FB (2002) Notes on the coral-inhabiting Megatrematinae and the description of a new tribe, new genus and three new species (Cirripedia: Sessilia: Pyrgomatidae). *Sessile Organisms*, 19(2): 57–68.
- Ross A & Yamaguchi T (2001) Site selection, wall development and biogeography of *Galkonia indica*, an Indo-west Pacific coral-inhabiting barnacle. *Biogeography*, 3: 59–68.
- Rumphius GE (1705) D’Amboinsche Rariteitkamer, behelzende eene beschryvinge van allerhande zoo weeke als harde schaalvisschen, te weeten raare krabben, kreeften, en diergely-ke zeedieren, als mede allerhande hoorntjes en schulpen, die men in d’Amboinsche Zee vindt: daar beneven zommige mineraalen, gesteenten, en soorten van aarde, die in d’Amboinsche, en zommige omleggende eilanden gevonden worden. Verdeelt in drie boeken, en met nodige printverbeeldingen, alle naar ‘t leven getekent, voorzien (ed. 1). Francois Halma, Amsterdam. Pp. (1–28), 1–340, (1–43), pls. 1–60.
- Rüppell E (1830) Beschreibung und Abbildung von 24 Arten kurzschwänzigen Krabben, als Beitrag zuur Naturgeschichte des rothen Meeres. HL Brönnner, Frankfurt am Main, pp. 28, pls. 1–6.

- Sakakura K (1934) Pleistocene *Pyrgoma* from Tiba Prefecture. Journal of the Geological Society of Japan, Tokyo, 41: 575–581. **(464)**
- Sandeep MI & Costlow JD (1961) The presence of decapod pigment-activating substances in the central nervous system of representative Cirripedia. Biological Bulletin, 120(2): 192–205. **(465)**
- Sander-Rang PK (1829) Manuel de l'Histoire naturelle des Mollusques et de leurs Coquilles, ayant pour base de classification celle de M. le Baron Cuvier. Paris, pp. 390.
- Sandison EE (1954) The identification of the nauplii of some South African barnacles with notes on their life histories. Transactions of the Royal Society of South Africa, 34: 69–101. **(466)**
- Sars GO (1879) Crustacea et Pycnogonidae nova in itinere 2do et 3tio expeditionis Norvegicae anno 1877 & 78 collecta (Prodromus descriptionis). Archiv for matematik og naturvidenskab, Fjerde bind 4: 427–476. Forlag af Alb. Cammermeyer, Kristiania.
- Say T (1822) An account of some marine shells of the United States. Journal of the Academy Natural Sciences Philadelphia, 2(2): 221–248, 302–325. **(467)**
- Scheffer VB (1939) Organisms collected from whales in the Aleutian Islands. Murrelet, 20: 67–69. **(468)**
- Schröter JS (1786). Einleitung in die Conchylien-Kenntnis nach Linné. Halle, pls. 8, 9. **(469)**
- Schumacher CF (1817) Essai d'un nouveau système des habitations des vers Testacés; avec XXII planches. Schultz, Copenhagen, pp. 287. **(470)**
- Schwartz FJ (1960) The barnacle *Platylepas hexastylus*, encrusting a green turtle *Chelonia mydas mydas* from Chincoteague Bay, Maryland. Chesapeake Science, 1(2): 116–117. **(472)**
- Seguenza G (1873–1876) Ricerche paleontologiche intorno ai Cirripedi terziarii della provincia di Messina, con appendice intorno ai Cirripedi viventi nei Mediterraneo, e sui fossili terziarii dell'Italia Meridionale. Parte I, Balanidi e Verrucidi (1873, pp. 265–366), Parte II, Terza famiglia, Lepadidi (1876, pp. 367–481). Atti della Accademia di Pontaniana, 10: 265–481, pl. A, B, i–x. **(473)**
- Sewell RBS (1926) A study of *Lithotrya nicobarica* Reinhardt. Records of the Indian Museum, 28 (IV): 269–330, 18 figs, pls. 14–15. **(474)**
- Shen X, Chan BKK & Tsang LM (2015a) The complete mitochondrial genome of common fouling barnacle *Amphibalanus amphitrite* (Darwin, 1854) (Sessilia: Balanidae) reveals gene rearrangements compared to pancrustacean ground pattern. Mitochondrial DNA, 26(5), 773–774.
- Shen X, Tsang LM, Chu KH, Achituv Y & Chan BKK (2015b) Mitochondrial genome of the intertidal acorn barnacle *Tetraclita serrata* Darwin, 1854 (Crustacea: Sessilia): Gene order comparison and phylogenetic consideration within Sessilia. Marine Genomics, 22, 63–69.
- Shen X, Chan BKK & Tsang LM (2016a) The mitochondrial genome of *Nobia grandis* Sowerby, 1839 (Cirripedia: Sessilia): the first report from the coral-inhabiting barnacles family Pyrgomatidae. Mitochondrial DNA, 27(1), 339–341.
- Shen X, Chu KH, Chan BKK & Tsang LM (2016b) The complete mitochondrial genome of the fire coral-inhabiting barnacle *Megabalanus ajax* (Sessilia: Balanidae): gene rearrangements and atypical gene content. Mitochondrial DNA, 27(2), 1173–1174.
- Simon-Belcher N, Huchon D & Achituv Y (2007) Phylogeny of coral-inhabiting barnacles (Cirripedia; Thoracica; Pyrgomatidae) based on 12S, 16S and 18S rDNA analysis. Molecular Phylogenetics & Evolution, 44: 1333–1341.
- Simon-Blecher N, Hosie AM, Guy-Haim T, Chan BKK & Achituv Y (2015) Speciation, phenotypic plasticity, or ontogeny, the case of the genus *Galkinius* (Pyrgomatidae, Cirripedia, Crustacea). Zoological Journal of the Linnean Society, DOI: 10.1111/zoj.12314.
- Skerman TM (1960) Note on *Stylochus zanzibaricus* Laidlow (Turbellaria, Polycladida), an inspected predator of barnacles in the port of Auckland, New Zealand. New Zealand Journal of Science, 3: 610–614, figs. 1–3. **(475)**
- Smith SI (1879) The stalk-eyed crustaceans of the Atlantic coast of North America north of Cape Cod. Transactions of the Connecticut Academy of Arts and Science, 5 (1): 27–136.
- Soong KY & Chang KH (1983) The coral-inhabiting barnacles (Crustacea: Thoracica: Pyrgomatidae) from southern-most coast of Taiwan. Bulletin of the Institute of Zoology, Academia Sinica, 22(2): 243–253.
- Southward AJ (1964) On the European species of *Chthamalus* (Cirripedia). Crustaceana, 6(4): 241–254, pl. VII. **(476)**
- Southward AJ (1975) Intertidal and shallow water Cirripedia of the Caribbean. Studies of the Fauna of Curaçao and Caribbean Islands, 46(150): 1–53. **(477)**
- Southward AJ & Crisp DJ (1963) Barnacles of European Waters. In: Catalogue of Main Marine Fouling Organisms, Volume 1, Barnacles. Organisation for Economic Cooperation and Development, Paris, pp. 1–46, figs. 1–25. **(478)**
- Southward AJ & Newman WA (2003) A review of some common Indo-Malayan and western Pacific species of *Chthamalus* barnacles (Crustacea: Cirripedia). Journal of the Marine Biological Association of the United Kingdom 83(4): 797–812.
- Southward AJ, Burton RS, Coles SL, Dando PR, De Felice R, Hoover J, Parnell PE, Yamaguchi T. & Newman WA (1998) Invasion of Hawaiian shores by an Atlantic barnacle. Marine Ecology Progress Series, 165: 119–126.
- Sowerby GB (1823) The genera of recent and fossil shells, for the use of students in Conchology and Geology, with original plates by James Sowerby (nos. i–xvii), continued by J. de C. Sowerby (nos. xviii–xlii). GB Sowerby, London. No pagination, 270 plates. [1821–1834] **(479)**
- Sowerby GB (1833) *Pollicipes ruber* and *polymerus* n. sp. Proceedings of the Zoological Society of London, 1: 74. **(481)**
- Sowerby GB (1839) A Conchological Manual. G.B. Sowerby, London. 130 pp., 530 figs. **(482)**
- Spengler L (1790) Beskrivelse og Oplysning over den hidindtil lidet udarbejdede Slægt af mangeskallede Konchylier, som Linnaeus har daldet *Lepas*, med tilføiede nye og ubeskrevne Arter. (Om Conchyliæ-Slægten *Lepas*). Skrifter Naturhistorie Selskabet, Bd. 1(1): 158–212. **(484)**
- Spengler L (1793) Beskrivelse over tvende nye Arter af *Lepas*. Skrifter Naturhistorie Selskabet, Bd. 2: 103–110. **(485)**
- Stebbing TRR (1894) A new pedunculate Cirripede. Annals and Magazine of Natural History, Series 6, Volume 13: 443–444. London.
- Stebbing TRR (1900) On Crustacea brought by Dr. Willey from the South Seas. Zoological results based on material from New Britain, New Guinea, Loyalty Islands and elsewhere, 1895–97. Part V. Cambridge. Pp. 605–606, 674–687, pls. 743–74. **(486)**
- Stebbing TRR (1910) No. 6. General Catalogue of South Africa. Crustacea (Part V of South African Crustacea, for the Marine Investigations in South Africa). Annals of the South African Museum, VI: 563–776. [Cirripedia only] **(487)**
- Stephensen K (1938) Cirripedia (including Rhizocephala). The Zoology of Iceland, 3(30–31), pp. 1–11. **(488)**
- Stephenson W (1968) The intertidal acorn barnacle *Tetraclita vitiata* Darwin at Heron Island. University of Queensland Papers, Great Barrier Reef Committee, 1(2): 51–59. **(489)**
- Stephenson W, Endean R & Bennett I. (1958) An ecological survey of the marine fauna of Low Isles, Queensland. Australian Journal of Marine and Freshwater Research, 9(2): 261–318. **(490)**
- Stimpson W (1858) Crustacea Cancroidea et Coryoidea: Prodromus descriptionis animalium evertibratorum, quae in Expeditione ad Oceanum Pacificum Septentrionalem, a Republica Federata missa. Cadwaladaro Ringgold et Johanne Rodgers Ducibus,

- oversavit et descripsit W. Stimpson. Pars VI. Proceedings of the Academy of Natural Sciences, Philadelphia 10: 31–40.
- Stokes L & Broderip WJ (1828) Note. Description of *Caryophyllia smithii* n. sp. The Zoology Journal, 3: 485–486.
- Stubbings HG (1936) Cirripedia. Scientific Reports of the John Murray Expedition 1933–34, 4(11): 1–70, figs. 30. British Museum (Natural History). (492)
- Stubbings HG (1940) Cirripedia (Additional Part). Scientific Reports of the John Murray Expedition 1933–34, 7(3). British Museum (Natural History), London. Pp. 383–400. (493)
- Stubbings HG (1961a) Some Cirripedia from the Persian Gulf. Annals and Magazine of Natural History, series 13, 4(34): 171–176. (494)
- Stubbings HG (1961b) Cirripedia Thoracica from tropical West Africa. Scientific results of the Danish Expedition to the coasts of tropical West Africa. 1945–1946. Atlantide Report, 6: 7–41. (495)
- Stubbings HG (1963a) Cirripedia from South Vietnam. Videnskabelige Meddelelser Naturhistorisk Forening i København, 125: 327–335. (496)
- Stubbings HG (1963b) Cirripedia of the tropical South Atlantic coast of Africa. Expédition Océanographique belge dans les eaux cœtières africaines de l'Atlantique sud (1948–1949). Research Science 3(10): 1–39. (497)
- Stubbings HG (1964a) Cirripedia, 4. Résultats scientifique des campagnes de la Calypso aux îles du Cap Vert (1959). Annales de l'Institut Océanographique (CALYPSO 4) 41: 103–112. (498)
- Stubbings HG (1964b) Cirripedia from the Congo Estuary and adjacent coasts in the Musée Royal de l'Afrique Centrale, Turvuren, Belgium. Revue Zoologique et Botanique de l'Afrique, 69(3–4): 327–347. (499)
- Stubbings HG (1965) West African Cirripedia in the collections of the Institut Français d'Afrique Noire, Dakar Senegal. Bulletin de l'Institut français d'Afrique noire, 27, series A, 3: 876–907. (500)
- Stubbings HG (1967) The cirriped fauna of tropical west Africa. Bulletin of the British Museum (Natural History), Zoology, 15(6): 229–319, pl. 1. (501)
- Suhani A (1966) A new species of *Balanus* (Crustacea: Cirripedia) from Singapore. Bulletin of the National Museum, Singapore, 33(9): 65–68. \*(502)
- Tanaka M, Mori K, Nojima S, Kikuchi T, Shibata T, Nishino T & Omori K (1985) Community structure of a rocky shore in Tsujishima Island, Amakusa. I. Horizontal and vertical distribution pattern of common marine animals. Publications of the Amakusa Marine Biology Laboratory, Kyushu University, 8(1): 1–26. (504)
- Tarasov NI & Zevina GB (1957) Cirripedia. Fauna SSSR. Zoologicheskii Institut, Akademy Nauk SSSR, (new series), 69, volume 6, part 1: 1–268. (505)
- Temminck CJ (1836) Coup d'oeil sur la Faune des Îles de la Sonde et de l'Empire du Japon. Discours préliminaire destiné à servir d'introduction à la Faune du Japon. Müller, Amsterdam, pp. 1–26.
- Tomlinson JT (1963) Two new acrothoracican cirripeds from Japan. Publications of the Seto Marine Laboratory, 11(2): 263–280.
- Totton AK (1940) New species of the cirripede genus *Oxynaspis* commensal with *Antipatharia*. Annals and Magazine of Natural History, (11)6(36): 645–86, figs. 1–31. (508)
- Tsang LM, Chan BKK, Wu TH, Ng WC, Chatterjee T, Williams GA & Chu KH (2008) Population differentiation of the barnacle *Chthamalus malayensis*: postglacial colonization and recent connectivity across Pacific and Indian Oceans. Marine Ecology Progress Series, 364: 107–118.
- Tsang LM, Chan BKK, Shih FL, Chu KH & Chen CLA (2009) Host associated speciation in the coral barnacle *Wanella milleporae* (Cirripedia: Pyrgomatidae) inhabiting the *Millepora* coral. Molecular Ecology, 18: 1463–1475.
- Tsang LM, Wu TH, Ng WC, Williams GA, Chan BKK & Chu KH (2011) Comparative phylogeography of Indo-West Pacific intertidal barnacles. Crustacean Issues, 1: 183–199.
- Tsang LM, Achituv Y, Chu KH & Chan BKK (2012) Zoogeography of intertidal communities in the West Indian Ocean as determined by ocean circulation systems: pattern from the *Tetraclita* barnacles. PLoS ONE 7(9): e45120. doi:10.1371/journal.pone.0045120
- Tsang LM, Wu TH, Shih H-T, Williams GA, Chu KH & BKK Chan (2012) Genetic and morphological differentiation of the Indo-West Pacific intertidal barnacle *Chthamalus malayensis*. Integrative & Comparative Biology, 52(3): 388–409.
- Tsang LM, Chan BKK, Williams GA & Chu KH (2013) Who is moving where? Molecular evidence reveals patterns of range shift in the acorn barnacle *Hexechamaesipho pilsbryi* in Asia. Marine Ecological Progress Series, 488: 187–200.
- Tsang LM, Chu KH, Nozawa Y & Chan BKK (2014) Morphological and host specificity evolution in coral symbiont barnacles (Balanomorpha: Pyrgomatidae) inferred from a multi-locus phylogeny. Molecular Phylogenetics & Evolution, 77: 11–22.
- Tsang LM, Chu KH, Achituv Y & Chan BKK (2015a) Molecular phylogeny of the acorn barnacle family Tetraclitidae (Cirripedia: Balanomorpha: Tetraclitoidea): Validity of shell morphology and arthropodal characteristics in the systematics of tetraclitid barnacles. Molecular Phylogenetics & Evolution, 82: 324–329.
- Tsang LM, Shen X, Chu KH & Chan BKK (2015b) Complete mitochondrial genome of the acorn barnacle *Striatobalanus amaryllis* (Crustacea: Maxillopoda): the first representative from Archaeobalanidae. Mitochondrial DNA, 26(5), 761–762.
- Tubb JA (1946) On the occurrence of *Alepas pacifica* Pilsbry in Tasmania. Records of the Australian Museum, 21(7): 383–385. (509)
- Utinomi H (1942) Distribution of boring molluscs and cirripeds in the rocky zone of Iwayama Bay. South Sea Science (Kagaku nanyo), Japanese Society for the Promotion of Scientific Research, 5(1): 1–14. (510)
- Utinomi H (1943) The larval stages of *Creusia*, the barnacle inhabiting reef corals. Annotationes Zoologicae Japonenses, 22(1): 15–22. (511)
- Utinomi H (1949a) Studies on the cirripedian fauna of Japan. VI. Cirripeds from Kyusyu and Ryukyu Islands. Publications of the Seto Marine Laboratory, 1(2): 19–37. (512)
- Utinomi H (1949b) Further notes on cirripeds from the Ogasawara Islands. Pacific Science, 3(1): 93–99. (513)
- Utinomi H (1950) Cirripeds commonly taken by dredging near Tanabe Bay (Record of collections dredged from off Minabe, Prov. Kii, IV). Nanki Seibutu, 2(2): 60–65. (514)
- Utinomi H (1954) Invertebrate fauna of the intertidal zone of the Tokara Is. IX Cirripedia. Publications of the Seto Marine Laboratory, 4(1): 17–26, figs. 1–2. (516)
- Utinomi H (1955b) Studies on the Cirripedia of Japan. III. Ecological evidences. Bulletin of the Biogeographical Society of Japan, 16–19: 124–134. (518)
- Utinomi H (1956) Coloured illustrations of seashore animals of Japan. Osaka, Hoikusha, pp. I–XVII, 1–167, text– figs. 1–44, pls. 1–64. [In Japanese] (520)
- Utinomi H (1958a) Studies on the cirripedian fauna of Japan. VII. Cirripeds from Sagami Bay. Publications of the Seto Marine Laboratory, 6(3): 281–311. (522)
- Utinomi H (1958b) A study of the productivity of the Tanabe Bay. VII. Horizontal distribution of intertidal communities on rocky shores around the Tanabe Bay (Preliminary Report). Records of Oceanographic Works of Japan, Special Number 2: 50–56. (523)
- Utinomi H (1959a) Thoracic cirripeds from the environs of Banyuls. Vie et Milieu, 10(4): 379–399. (524)
- Utinomi H (1959b) Cirripedia Thoracica from the western Mediterranean. Vie et Milieu, 10(4): 400–404. (525)
- Utinomi H (1959c) A new gall-forming barnacle imbedded in the bark of a gogonacean colony (*Acasta gregaria* n. sp.). Publications of the Seto Marine Laboratory, 7(3): 313–318. (526)

- Utinomi H (1960) On the world wide dispersal of a Hawaiian barnacle *Balanus amphitrite hawaiiensis* Broch. Pacific Science, 14(1): 43–50. (527)
- Utinomi H (1962) Studies on the cirripedian fauna of Japan. VIII Thoracic cirripeds from Western Kyusu. Publications of the Seto Marine Laboratory, 10(2): 211–239, figs. 1–12. (528)
- Utinomi H (1964) Coloured illustrations of sea-shore animals of Japan. Revised 8<sup>th</sup> printing. Hoikusha, Japan, pp. 167. [Cirripedia, pp. 49–53, pls. 25–26] (529)
- Utinomi H (1965) A giant Antarctic barnacle *Hexelasma antarcticum* Borradaile (Cirripedia Thoracica). Scientific Reports of the Japanese Antarctic Research Expedition 1956–1962, Series E, 25: 1–15, figs. 1–4, pls. 1–2. (530)
- Utinomi H (1966) Recent immigration of two foreign barnacles into Japanese waters. Proceedings of the Japanese Society of Systematic Zoology, 2: 36–39. (531)
- Utinomi H (1967) Comments on some new and already known cirripeds with emended taxa, with special reference to the parietal structure. Publications of the Seto Marine Laboratory, 15(3): 199–237. (532)
- Utinomi H (1968a) A revision of the deep-sea barnacles *Pachylasma* and *Hexelasma* from Japan with a proposal of new classification of the Chthamalidae (Cirripedia, Thoracica). Publications of the Seto Marine Laboratory, 16: 21–39. (533)
- Utinomi H (1968b) Pelagic, shelf and shallow water cirripedia from the Indo West Pacific. Videnskabelige Meddelelser Naturhistorisk Forening i København, 131: 161–186, pls. 1–2. (534)
- Utinomi H (1969a) Cirripedia of the Iranian Gulf. Videnskabelige Meddelelser Naturhistorisk Forening i København, 132: 79–94. (535)
- Utinomi H (1969b) Coloured illustrations of seashore animals of Japan. 2<sup>nd</sup> edition. Hoikusha Publishers, Osaka, pp. xix + 166, pls. 1–64. [Cirripedia, pp. 49–53] (536)
- Utinomi H (1970) Studies on the cirripedian fauna of Japan. 9. Distributional survey of the thoracic cirripedes in the southeastern part of the Japanese Sea. Publications of the Seto Marine Laboratory, 17(5): 339–372, figs. 1–72. (537)
- Utinomi H (1971) Arthropoda Crustacea: Cirripedia. New Illustrated Encyclopedia of the Fauna of Japan, Part 2: 505–518, figs. 607–654. (538)
- Utinomi H & Kikuchi T (1966) Fauna and flora of the sea around the Amakusa Marine Biological Laboratory. Amakusa Marine Biology Laboratory, Kyushu University, 6: 1–12, fig. 1. (539)
- Van Beneden E (1867–1870) Sur la composition et la signification de l'oeuf, basées sur l'étude de son mode de formation et des premiers phénomènes embryonnaires (Mammifères, Oiseaux, Crustacés, Vers). Mémoires Couronnés et Mémoires Savants Etrangers, publiés par l'Académie Royale des Sciences, des Lettres, et des Beaux-Arts de Belgique, 34: 1–283, pls. 12.
- Van Syoc RJ (1992) Living and fossil populations of a Western Atlantic barnacle *Balanus subalbidus* Henry, 1974, in the Gulf of California region Proceedings of the San Diego Society of Natural History 12: 1–7.
- Van Syoc RJ & Newman WA (2010) Morphology and evolutionary ecology of a sponge–barnacle symbiosis: Four new genera of barnacles (Archaeobalanidae, Bryozobiinae). Journal of Experimental Marine Biology & Ecology, 392: 65–88.
- Van Syoc RJ & Dekelboum AM (2011) Oxynaspididae (Crustacea, Cirripedia): phylogenetics and evolutionary ecology, with descriptions of three new genera and six new species. Zootaxa, 3103: 1–32.
- Van Syoc RJ & Dekelboum AM (2012) *Sclerapsis* nom. nov., replacement name for *Pycnaspis* Van Syoc & Dekelboum. Zootaxa, 3296: 68.
- Vaughan TW (1918) A critical review of the literature on the simple genera of the Madreporaria Fungidae, with a tentative classification. Proceedings of the United States National Museum, 28: 371–424.
- Veron JEN (1985) New Scleractinia from Australian coral reefs. Records of the Western Australian Museum, 12(1): 147–183.
- Veron JEN (1990) New Scleractinia from Japan and other Indo-West Pacific countries. Galaxea, 9: 95–173.
- Veron JEN & Pichon M (1980) Scleractinia of Eastern Australia. Part III. Families Agaraciidae, Siderastreidae, Fungiidae, Oculinidae, Merulinidae, Mussidae, Pectiniidae Caryophylliidae, Dendrophylliidae. Australian Institute of Marine Science, Monograph Series, 4: 1–459.
- Veron JEN & Wallace C (1984) Scleractinia of eastern Australia. V. Acroporidae. Australian Institute of Marine Science, Monograph Series, 6: 1–483.
- Verrill AE (1864) List of the polyps and corals sent by the Museum of Comparative Zoology to other institutions in exchange, with annotations. Bulletin of the Museum of Comparative Zoology, 1: 29–60.
- Verrill AE (1866) Synopsis of the polyps and corals of the North Pacific Exploring Expedition, under Commodore C. Ringgold and Captain John Rogers, United States Navy, from 1853 to 1856. Collected by Dr. Wm. Stimpson, naturalist to the expedition. With descriptions of some additional species from the west coast of North America. Part 3: Madreporaria. Proceedings of the Essex Institute, 5(3): 17–50, pls. 1–2.
- Verrill AE (1869) Polyps and corals of the North Exploring Expedition. Additions and corrections. Communications of the Essex Institute, Salem, 6: 51–70.
- Von Siebold PF (1824) De Historiae Naturalis in Japonia statu, nec non de augmento emolumentisque in decursu perscrutationum exspectandis dissertatio, cui accedunt Spicilegia Faunae Japonicae, auctore G.T. de Siebold, med. doct. Complurium Societatum Membro, pp. 1–16. Bataviae. [Jakarta]
- Voris HK & Jeffries WB (1997) Size, distribution and significance of capitular plates in *Octolasmis* (Cirripedia: Poecilasmatidae). Journal of Crustacean Biology, 17(2): 217–226. (541)
- Wang JJ, Huang ZG, Lin S, Li CY & Zheng CX (1993) An ecological study of fouling organisms in Beihai Harbour, Beibu Bay, China. In: Morton BS (ed.) The Marine Biology of the South China Sea. Proceedings of the First International Conference on the Marine Biology of Hong Kong and the South China Sea, Hong Kong, 28 October–3 November 1990. Hong Kong University Press. Pp. 167–180. (542)
- Weisbord NE (1971) A new species of *Coronula* (Cirripedia) from the Lower Pliocene of Venezuela. Bulletin of American Paleontology, 60(265): 87–101. (543)
- Weisbord NE (1977) Scalpellid barnacles (Cirripedia) of Florida and of surrounding waters. Bulletin of American Paleontology, 72(299): 235–311, pls. 26–34. (544)
- Wells HW (1966) Barnacles of the NW Gulf of Mexico. Quarterly Journal of the Florida Academy of Science, 29: 81–95. (545)
- Weltner W (1894) Zwei neu Cirripeden aus dem Indischen Ozean (*Scalpellum*, *Megalasma*). In: Sitzung-Berichte der Gesellschaft Naturforschender Freunde, Number 2. Berlin, pp. 80–87. (546a)
- Weltner W (1895) Die Cirripeden von Patagonien, Chile und Juan Fernandez. Archiv für Naturgeschichte, Jahrbücher, 61(2): 288–292. (546b)
- Weltner W (1897) Verzeichnis der bisher beschriebenen recenten Cirripeden-Arten. Mit Angabe der im Berliner Museum vorhandenen species und ihrer fundorte. Archiv für Naturgeschichte, Jahrbücher, 63(1): 227–280.
- Weltner W (1898) Beiträge zur Meeresfauna von Helgoland. IX. Die Cirripeden Helgolands. Wissenschaftliche Meeresuntersuchungen 2(1): 436–447. (549)
- Weltner W (1899a) Cirripeden Ergebnisse einer Reise nach dem Pacific. Zoologische Jahrbücher, 12: 441–447. (551a)

- Weltner W (1899) Epidermeswucherungen eines Wales, hervorgerufen durch Cirripeden (*Coronula*). Gesellschaft Naturforschender Freunde Berlin, 6: 102–103. **(551b)**
- Weltner W (1900) Die Cirripeden der Arktis. In: Römer F & Schaudinn F, Fauna Arctica, 1(2): 289–312. **(552)**
- Weltner W (1910) Cirripeden von Ostafrika. In: Voeltzkow VA (ed.) Reise in Ostafrika, 2: 257–528. **(553)**
- Weltner W (1922) Cirripedia der deutschen Tiefsee-Expedition. Wissenschaftliche Ergebnisse der Deutschen Tiefsee-Expedition auf dem Dampfer VALDIVIA 1895–1899, 23(2). Jena. Pp. 59–112. **(554)**
- William, AB & Porter HJ (1964) An unusually large turtle barnacle *Chelonibia patula* on a blue crab from Delaware Bay. Chesapeake Science, 5(3): 150–153. **(555)**
- Williams EH (1978) *Conchoderma virgatum* (Spengler) (Cirripedia Thoracica) in association with *Dinemoura latifolia* (Steenstrup & Lutken) (Copepoda, Caligidea), a parasite of the shortfin Mako, *Isurus oxyrinchus* Rafinesque (Pisces, Chondrichthyes). Crustaceana, 34(1): 109–111. **(556)**
- Wisely B & Blick RAP (1964) Seasonal abundance of first stage nauplii in ten species of barnacles at Sydney. Australian Journal of Marine and Freshwater Research, 15(2): 162–171. **(557)**
- Withers TH (1913) Some Miocene cirripedes of the genera *Hexelasma* and *Scalpellum* from New Zealand. Proceedings of the Zoological Society of London, 1913: 840–854. **(558)**
- Withers TH (1924) The Fossil Cirripedes of New Zealand. New Zealand Department of Mines, Geological Survey Branch. Paleontological Bulletin, 10: 1–47. Wellington, New Zealand.
- Withers TH (1928) The cirripede *Chelonibia caretta*, Spengler, in the Miocene of Zanzibar Protectorate. Annals and Magazine of Natural History, series 10, 2(10): 390–392. **(559)**
- Withers TH (1929) The cirripede *Chelonibia* in the Miocene of Gironde, France and Vienna, Austria. Annals and Magazine of Natural History, series 10, 4: 566–569. **(560)**
- Withers TH (1932) Barnacles from Magnetic Island, North Queensland. Memoirs of the Queensland Museum, 10: 122–124. **(561)**
- Withers TH (1953) Catalogue of fossil Cirripedia in the Department of Geology, Volume III Tertiary. British Museum (Natural History), London, 396 pp., figs. 1–105, pls. 1–64. **(562)**
- Wolff T (1960) Rankefødderne *Conchoderma* og *Coronula* på hvaler. [Notes on *Conchoderma* and *Coronula* on whales. Flora og Fauna, 66(1): 1–8. **(563)**
- Wong KKW, Tsang LM, Cartwright SR, Williams GA, Chan BKK & Chu KH (2014) Physiological responses of two acorn barnacles, *Tetraclita japonica* and *Megabalanus volcano*, to summer heat stress on a tropical shore. Journal of Experimental Marine Biology & Ecology, 461: 243–249.
- Wood W (1815) General conchology; or a description of shells arranged according to the Linnean system. John Booth, London, 246 pp.
- Wood-Mason J & Alcock A (1891) Natural history notes from HM Indian Marine Survey Steamer Investigator, Commander RF Hoskyn, Royal Navy, commanding. No. 21. Note on the results of the last season's deep-sea dredging. Annals and Magazine of Natural History, VII, 6<sup>th</sup> series (XXXIX): 258–272.
- Wu RSS (1975) The distribution of littoral barnacles in Hong Kong. In: Morton BS (ed.) Proceedings of the Pacific Science Association Special Symposium in Marine Science, Hong Kong, 1973. Hong Kong Government Printer. Pp. 146–153.
- Wu SC & Cai NE (1963) Studies on the life history of *Balanus amphitrite communis* Darwin. Studia Marina Sinica, 4: 103–119. **(565)**
- Wyville Thomson C (1873) Notes from the Challenger. Nature, 8: 347–349 [Aug. 28]
- Wyville-Thomson C (1877) The voyage of the Challenger. The Atlantic. Macmillan & Company, 424 pp.
- Yabe H & Sugiyama T (1932) Reef corals found in the Japanese seas. Scientific Reports, Tohoku Imperial University, second series (Geology), 75(2): 145–168.
- Yabe H. & Sugiyama T (1935) Geological and geographical distribution of reef-corals in Japan. Japanese Journal of Paleontology, 9: 183–217.
- Yabe H, Sugiyama T & Eguchi M (1936) Recent reef-building corals from Japan and the South Sea Islands under the Japanese mandate. Science Reports of the Tohoku Imperial University, Sendai, 2<sup>nd</sup> Series (Geology), Special Volume 1: 1–66, pls. 1–59.
- Yamaguchi T (1973) On *Megabalanus* (Cirripedia Thoracica) of Japan. Publications of the Seto Marine Laboratory, XXI (2): 115–140, pls. VI–VIII, figs. 1–11. **(566)**
- Yamaguchi T (1980) A new species belonging to the *Balanus amphitrite* Darwin group (Cirripedia, Balanomorpha) from the Late Pleistocene of Japan; an example of peripheral speciation. Journal of Paleontology, 54(5): 1084–1101, figs. 2, pls. 3. **(568)**
- Yamaguchi T (1987) Changes in the barnacle fauna since the Miocene and the infraspecific structure of *Tetraclita* in Japan (Cirripedia: Balanomorpha). Bulletin of Marine Science, 41(2): 337–350.
- Yan SK & Huang ZG (1993) Biofouling of ships in Daya Bay, China. In: Morton BS (ed.) The Marine Biology of the South China Sea. Proceedings of the First International Conference on the Marine Biology of Hong Kong and the South China Sea, Hong Kong, 28 October–3 November 1909. Hong Kong University Press. Pp. 131–135. **(569)**
- Yan T, Fang ZX & Zhang S (1996) A method for separation of the protein components of barnacle cement. Asian Marine Biology, 13: 117–121. **(570)**
- Yan W, Dong Y, Fang Z, Zang S, Weng J, Zhou J & Zhou L (1985) A preliminary study of the crosslinking chain of the barnacle cement. Tropical Oceanology, 4(4): 1–7. **(571)**
- Yan Y, Dong Y & Yan W (1994) An ecological study on the biofouling on buoys in Zhanjiang port. Tropical Oceanology, 13(2): 68–74. **(572)**
- Yan Y, Dong Y & Yin F (1983) Comparison between the primary and secondary cements of *Balanus reticulatus* Utinomi. Tropical Oceanology, 2(1): 231–237. **(573)**
- Yan Y & Chan BKK (2001) Larval development of *Chthamalus malayensis* (Cirripedia: Thoracica) reared in the laboratory. Journal of the Marine Biological Association of the United Kingdom 81: 623–632.
- Yan Y, Chan BKK & Williams GA (2006) Reproductive development of the barnacle *Chthamalus malayensis* in Hong Kong; implications for the life history patterns of barnacles on seasonal, tropical shores. Marine Biology, 148: 875–887.
- Yan Y, Dong Y & Yin F (1988) A comparison between the primary and secondary cements of *Balanus reticulatus* Utinomi. South China Sea Institute of Oceanology, Academia Sinica, Selected Oceanographic Works, 1: 224–252. **(574)**
- Yan Y, Huang LM & Miao S (2004) Occurrence of an epizoic barnacle *Octolasmis angulata* on the crab *Charybdis feriatus* from Daya Bay, China. Journal of the Marine Biological Association of the United Kingdom, 84(3): 619–620.
- Yi J & Li F (1987) Community ecology of barnacle animal on intertidal hard bed in Jiuling River estuary, Fujian Province. Tropical Oceanology, 6(2): 53–61. **(575)**
- Yi J & Li F (1990) Ecological characteristics of benthic macro animals on the intertidal hard bed in Jiuling River estuary. Tropical Oceanology, 9(3): 48–58. **(576)**
- Young PS (1998a) Cirripedia (Crustacea) from the “Campagne Biazores” in the Azores region, including a generic revision of the Verrucidae. Zoosystema, 20(1): 31–92. **(577)**
- Young PS (1998b) Maxillopoda. Thecostraca: 263–285. In: Young PS (ed.) Catalogue of Crustacea of Brazil. Museu Nacional, University of Rio de Janeiro, Série Livros, 6. Rio de Janeiro, pp. xvii, 1–717.

- Young PS (2002) The Verrucidae (Crustacea, Cirripedia) from the western coast of North America, with a revision of the genus. *Arquivos do Museu Nacional, Rio de Janeiro*, 60(1): 5–40.
- Young PS (2007) The Scalpellomopha (Crustacea, Cirripedia), with a list of extant species (except the Calanticidae). *GALATHEA Report*, 21: 7–73.
- Yusa Y & Yamato S (1999) Cropping of sea anemone tentacles by a symbiotic barnacle. *Biological Bulletin* 197(3): 315–318.
- Yusa Y, Yamato S & Marumura M (2001) Ecology of a parasitic barnacle, *Koleolepas avis*: relationship to the hosts, distribution, left-right asymmetry and reproduction. *Journal of the Marine Biological Association of the United Kingdom*, 81(5): 781–788.
- Zardus JD, Lake DT, Frick MG & Rawson PD (2014) Deconstructing an assemblage of “turtle” barnacles: species assignments and fickle fidelity in *Chelonibia*. *Marine Biology*, 161: 45–59.
- Zevina GB (1968b) New species of Lepadomorpha (Cirripedia, Thoracica) from the Bay of Tonkin. *Crustaceana*, 15: 35–40. **(579)**
- Zevina GB (1972a) Benthic Lepadomorpha (Cirripedia) from the southeast Pacific. *Crustaceana*, 22: 39–63. **(580)**
- Zevina GB (1973) Scalpellidae (Cirripedia) of the Gulf of Alaska. *Trudy Instituta Oceanologii Akademii Nauk USSR*, 91: 136–140. [in Russian] **(582)**
- Zevina GB (1973) Scalpellidae (Cirripedia) from the Indian Ocean 1. Species of subgenera *Scalpellum* and *Arcoscalpellum* of the genus *Scalpellum*. *Zoologicheskii Zhurnal*, 52: 842–848. [in Russian]
- Zevina GB (1974a) New species of Lepadomorpha (Cirripedia, Thoracica) from the south–east Pacific. *Crustaceana*, 22: 39–63. **(583a)**
- Zevina GB (1975) Cirripedia Thoracica of the American Caribbean. *Trudy Instituta Oceanologii Akademii, Nauk USSR*, 100: 233–258. [in Russian]
- Zevina GB (1978a) A new classification of the family Scalpellidae Pilsbry (Cirripedia, Thoracica). Part 1. Subfamilies Lithotryinae, Calanticinae, Pollicipinae, Scalpellinae, Brochiinae and Scalpellopsinae. *Zoologicheskii Zhurnal*, 57(7): 998–1006. [in Russian] **(584)**
- Zevina GB (1978b) A new classification of the Scalpellidae (Cirripedia, Thoracica). Part 2. Subfamilies Arcoscalpellinae and Meroscalpellinae. *Zoologicheskii Zhurnal*, 57(9): 1343–1352. [in Russian] **(585)**
- Zevina GB (1980) A new classification of the Lepadomorpha (Cirripedia). *Zoologicheskii Zhurnal*, 59(5): 689–698. [in Russian] **(586)**
- Zevina GB (1981) Barnacles of the suborder Lepadomorpha (Cirripedia, Thoracica) of the World Ocean. Part 1 Family Scalpellidae. *Opredeliteli Faune SSSR*, 127: 1–406, 300 figs. Zoologicheskii Institut, Akademy Nauk ,SSSR; Leningrad. [in Russian] **(589)**
- Zevina GB (1982) Barnacles of the suborder Lepadomorpha (Cirripedia, Thoracica) of the world ocean. Part 2. Guides to the fauna of the USSR-Zoologicheskii Institut Akademy Nauk SSSR; Leningrad. 223 pp, 162 figs. [in Russian] **(592)**
- Zevina GB (1987) Abyssal Cirripedia Verrucomorpha (Thoracica) of the Atlantic and Indian Ocean. *Zoologicheskii Zhurnal*, 66(9): 31–40. [in Russian]
- Zevina GB & Litvinova NM (1970) Supplement to the fauna of the barnacles (Cirripedia Thoracica) of the Red Sea. In: Kovalefsky AO (ed.) *Biology of the Sea*, 18: 172–181. Institute of Biology of the Southern Seas, Academy of Science, UKR SSR. [in Russian] **(593)**
- Zevina GB & Tarasov NI (1963) On the barnacles (Cirripedia, Thoracica) from the mainland coast of southeast Asia. *Trudy Instituta Okeanologii*, 70: 76–100, figs. 1–14. [in Russian] **(594)**
- Zevina GB, Zvyagintsev AY & Negashev SE (1992) Usonogie raki poberezh'ya V'etnama i ikh rol'v obrastanii [Barnacles of the Vietnam Coast and their role in encrustation]. *Vladivostok, Dal'nauka.*, pp. 142, figs. 69, tables 8. [in Russian]
- Zhang L, Huang Z, Li C & Zheng C (1984) An ecological study of fouling organisms in Xisha Islands. *Acta Oceanologia Sinica*, 3(4): 547–558. **(596)**
- Zheng C, Huang Z, Zhang L, Li C & Li F (1984) A preliminary study of the fouling organisms in Langya Bay. *Acta Oceanologia Sinica*, 3(2): 254. **(597)**
- Zullo VA (1963a) A preliminary report on systematics and distribution of barnacles (Cirripedia) of the Cape Cod Region. *Systematic Ecology Program, Marine Biology Laboratory, Woods Hole, Contributions*, 3: 1–33, figs. 1–66, pls. 1–2. **(598)**
- Zullo VA (1963b) A review of the Subgenus *Armatobalanus* Hoek (Cirripedia: Thoracica) with the description of new species from the California coast. *Annals and Magazine of Natural History*, series 13, 6: 587–594. **(599)**
- Zullo VA (1967) On the identity of some specimens assigned by Darwin, 1854 to *Balanus allium* Darwin (Cirripedia, Thoracica). *Crustaceana*, 13(1): 126–128. **(600)**
- Zullo VA (1968) Catalog of the Cirripedia named by Henry A. Pilsbry. *Proceedings of the Academy of Natural Sciences, Philadelphia*, 120(5): 209–235. **(601)**
- Zullo VA (1984) New genera and species of balanoid barnacles from the Oligocene and Miocene of North Carolina. *Journal of Paleontology*, 58: 1312–1338.
- Zullo VA & JS Bleakney (1966) The cirripede *Stomatolepas elegans* (Costa) on leatherback turtles from Nova Scotia waters. *Canadian Field Naturalist*, 80: 162–165. **(602)**
- Zullo VA & Newman WA (1964) Thoracic Cirripedia from a South East Pacific Guyot. *Pacific Science*, 18: 355–372. **(603)**