

STONE-CURLEWS, PRATINCOLES, CRAB- PLOVERS, JACANAS, PLOVERS, STILTS, CURLEWS, SANDPIPERS AND SNIPE

Order CHARADRIIFORMES¹

Vol. I., p. 26.

THIS large and important order, which is sometimes called *Limicolæ*, or shore-dwellers, comprises a very large number of birds spread over the entire globe, and having very diverse external characters. The group has alliances with the gulls on the one side and with the pigeons, by way of the sandgrouse, on the other. Included in it are the sheath-bills, *Chionididæ*, a small Antarctic family, the seed-snipe, *Thinocorythidæ*, an aberrant group, having the external appearance of a game bird, resident on the western side of South America and the Falkland Islands, often at high elevations, and the bustards, which, though common in India, do not extend to Malaya and need not be further considered here.

Apart from anatomical characters, there are very few features, other than those detailed in the key to the families, which separate this order from the neighbouring ones. The bill is generally slender—sometimes extremely so—and the nostrils are visible. The wings are long and pointed, with eleven primaries. The tarsus invariably, and usually the lower half of the tibia, is unfeathered.

The young are hatched covered with down, and able to run on emergence from the shell.

Much work remains to be done in Malaya on the birds of this order. Dates of early arrivals and late stayers are always worth recording, and there is little doubt that energetic collecting on both west and east coasts would add a number of species to the Peninsular list and also perhaps reveal that some of the birds we have hitherto regarded as rare are really not uncommon in their season.

Note.—Since the above was written a sanderling, (*Crocethia alba*) Pall., has been obtained in the Dindings by Mr A. T. Edgar. A detailed notice of the species will appear in the last volume of this work. The sanderling, with

¹ This classification, adopted in Volume I., is here maintained, although in some respects it is out-of-date.—F.N.C.

a wing measuring from 4·6 to 5 in. in length, is characterized by the presence of only *three* toes.

ARTIFICIAL KEY TO THE FAMILIES¹ OF MALAY CHARADRIINE BIRDS

- | | | | |
|---|---|---|-----------------------------|
| 1 | { | Toes and claws, especially the hind toe, extremely long | <i>Parridæ</i> , p. 111 |
| | | Toes not specially elongated | 2 |
| 2 | { | Nasal fissure in skull rounded; tarsus scaled all round; no hind toe; eyes very large | <i>Burhinidæ</i> , p. 115 |
| | | Nasal fissure in skull narrowed to a point | 3 |
| 3 | { | Tarsi never scaled behind; nostrils in a depression | 4 |
| | | Tarsi always scaled behind; nostrils in a groove | <i>Charadriidæ</i> , p. 120 |
| 4 | { | Bill longer than head, straight; plumage mainly pure white | <i>Dromadidæ</i> , p. 117 |
| | | Bill shorter than head, curved downwards at tip; not mainly white in plumage | <i>Glareolidæ</i> , p. 118 |

Family PARRIDÆ

Jacanas

THE single character given in the key (*antea*)—viz. the enormously lengthened toes and straightened claws—is sufficient to distinguish the birds of this family from all other *Limicoline* species. The alliance with the plovers and connected families is, however, somewhat artificial, and many arguments have been adduced for considering these birds as more closely connected with the rails.

The family consists of about twelve forms, spread over the tropics of Asia, Africa, America and Australia.

KEY TO THE MALAY SPECIES OF JACANAS

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|---|---|---|--|
| 1 | { | With frontal lappets; primaries without terminal processes | <i>Metopidius indicus</i> , p. 111 |
| | | With no frontal lappets; primaries lengthened into terminal processes | <i>Hydrophasianus chirurgus</i> , p. 113 |

Metopidius indicus

The Bronze-winged Jacana

Parra indica, Lath., *Ind. Orn.*, ii., 1790, p. 765 (India).

Metopidius indicus, Oates in Hume's *Nests and Eggs Ind. Birds* (2nd ed.), iii., 1890, p. 356; Sharpe, *Cat. Birds, Brit. Mus.*, xxiv., 1896, p. 72; Blanford, *Faun. Brit. Ind., Birds*, iv., 1898, p. 218; Oates, *Cat. Birds' Eggs, Brit. Mus.*, ii., 1902, p. 71; Robinson and Kloss, *Journ. Nat. Hist. Soc. Siam*, v., 1921,

¹ Misprinted "Sub-families" in Volume I., p. 26.

p. 57; Herbert, *Journ. Siam Soc., Nat. Hist. Suppl.*, vi., 1926, p. 345; Stuart Baker, *Faun. Brit. Ind., Birds* (2nd ed.), vi., 1929, p. 40.

Malay Name.—Unrecorded: nok prik (*Siamese*).

Description.—*Adult.*—Head, chin, throat, under parts, except the under tail coverts which are chestnut, black with a greenish gloss, sides of the breast and back of the neck decidedly purplish. A broad stripe from above the eye over the ear coverts and a small spot under the eye, white; mantle and secondary coverts, olive-bronze with an oily gloss, the feathers at the angle of the wing darker. Primaries and primary coverts, black, secondaries with the outer web greenish olive, the inner ones like the mantle; inner lining of wing, under wing coverts and axillaries, black; tail feathers, chestnut, the outer ones with rather darker margins. Upper back, rump and upper tail coverts, chestnut-maroon, with a strong wash of metallic lilac; flanks, similar but rather darker; thighs, brownish black. Sexes alike. A rounded spur at the angle of the wing.

Immature.—Crown, rufous, sides of the head and a stripe behind the eye, whitish; hind neck, dark glossy green, changing into purplish on the upper mantle. Lower mantle, upper back, scapulars and inner secondaries, olive-bronze as in the adults. Wings as in the adult. Lower back, rump and upper tail coverts, maroon. Tail feathers, dark olive-bronze at the base, with concentric bars of dark green and buffy white towards the tips. Below, white, the lower throat and breast, orange-buff; thighs, greyish black. Younger birds have the feathers of the mantle, scapulars, wing coverts and secondaries edged with pale rusty buff.

Nestling.—Young in down from the South Shan States have the head fulvous buff; the occiput and a median stripe, black; mantle and upper parts, rufous chestnut; a broad black stripe on each side, coalescing on the rump. Neck, blackish, the down tips, white; wing, chestnut-buff, the outer edge, white; under surface, white.

Soft Parts.—"Iris, brown; basal half of upper mandible and frontal lappet, livid blue, the portion near the gape, pink; remainder of upper and whole of lower mandible, green; a rose-coloured spot on either side of the base of the upper mandible; legs, toes and claws, bluish slate-coloured" (*Oates*).

Immature.—Iris, dark; bill, yellow; base of upper mandible from nostrils and lappet, dull olive-green; feet, pale lead-green; tibia, more yellowish.

Dimensions.—*Female.*—Total length, 11.5 in.; tail, 1.7 in.; wing, 7 in.; tarsus, 2.8 in.; bill from gape, 1.5 in.; middle toe and claw, 4 in. *Males* are a trifle smaller.

Range in the Malay Peninsula.—Blanford quotes the Malay Peninsula as within the range of this species, though on what authority we have been unable to discover. The only local specimen known to us is a male in very worn plumage, shot by the Chinese taxidermist of the Perak Museum in a swamp at Asam Kumbang, near Taiping, Perak, on 14th December 1911; another bird was seen at the same time.

Extralimital Range.—From the Indian Peninsula, through the Indo-Chinese countries to Cochin-China. Not in Ceylon. The Malay Peninsula,

Sumatra, Java and Celebes (?). Fairly common in Siam and not uncommon in the south of French Indo-China.

Nidification.—Mr E. G. Herbert found this jacana breeding in Central Siam, during July and as late as the middle of September. He describes the nest as “a very small collection of weeds, which are laid on the growing surface-weeds, far out in the swamp and away from all tall rushes.” The clutches in Siam are usually of four eggs, moderately broad ovals, but in one case of a very elongated type, and a good deal pointed towards one end. The eggs are highly glossy, of a ground-colour “from *café au lait* to stone-colour. The markings consist almost entirely of coarse and fine lines entangled in the utmost confusion; in colour they are mostly black, with a few in reddish brown.” One clutch averaged 1.4 by 1 in. and two others 1.57 by 1 in.

Habits.—There is no information as to the habits of this bird in the Malay Peninsula, except, of course, that it is an inhabitant of swamps. In other parts of its range it is variously described as familiar or “rather shy when alarmed, concealing itself by lying close on the weeds or plants, with its head and neck well stretched out level with the body. It is also an expert diver.” It feeds on insects and crustaceans and also on vegetable matter, and has a harsh and peculiar cry (*Blanford*).

Hydrophasianus chirurgus

The Pheasant-tailed Jacana or Lotus-Bird

Vol. I., p. 27.

Tringa chirurgus, Scop., *Del. Flor. et Faun. Insubr.*, ii., 1786, p. 92 (Philipp.).

Parra sinensis, Kelham, *Ibis*, 1882, p. 185.

Hydrophasianus chirurgus, Oates in Hume's *Nests and Eggs Ind. Birds* (2nd ed.), iii., 1890, p. 358; *Blanford, Faun. Brit. Ind., Birds*, iv., 1898, p. 220; Stuart Baker, *Faun. Brit. Ind., Birds* (2nd ed.), vi., 1929, p. 42.

Hydrophasis chirurgus, Sharpe, *Cat. Birds, Brit. Mus.*, xxiv, 1896, p. 78; Oates, *Cat. Birds' Eggs, Brit. Mus.*, i., 1902, p. 71.

Malay Name.—Burong tēratai.

Description.—*Adult in breeding plumage.*—Head to nape, throat and chest, white; back of head and a narrow line bordering the throat and hind neck, black; back of the neck, shining straw-yellow; back and scapulars, dark brown with a bronzy lustre, the scapulars paler. Bastard wing, black with white tips; upper wing coverts, white, the lesser ones with a buffy wash. Outer primary, black, the rest black with an increasing wedge of white until the innermost are almost entirely white, with black tips; secondaries, white, the innermost brownish; axillaries and under wing coverts, white. Under surface, sooty black, the under and upper tail coverts deeper black; tail, lengthened, black, with a bronzy lustre.

Adult in winter plumage.—Above, bronzy brown, the feathers with darker centres and paler edges, the longer tail coverts barred with black and white at their tips. Head, dull rufous brown, the feathers of the forehead

barred with black and white. From the nostril a white stripe running near the eye and broadening into golden yellow on the sides of the neck, and bordered above with black-and-white-barred feathers, a black stripe running from the lores, under the eye, and round the throat, expanding into a dark chocolate-brown patch on the breast. Chin and throat, white, the foreneck marked with buff, the rest of the under parts white. Primaries and secondaries as in summer, but the inner upper wing coverts greyish brown, on their outer webs barred with whitish, and brown on their inner webs and at the tips. Middle pair of tail feathers brownish, the rest white.

Immature.—Lacks the straw-yellow patch on the neck, but the head is more sandy rufous, and the feathers of the back and mantle are edged with the same. The black patch on the upper breast is more irregular, and broken up into spots and bars.

Adult and young birds at all ages have a short sharp spur at the angle of the wing; the outermost and sometimes the second and third primaries are prolonged for about three-quarters of an inch into a filamentous appendage, which broadens somewhat towards the tip. The fourth primary and, to a less extent, the fifth are narrowed to a sharp point, but have no appendages.

Soft Parts.—*In breeding plumage*.—Iris, brown; bill, bluish; legs and feet, pale plumbeous. *In winter plumage*.—Iris, dark; bill, bluish sea-green, darker at base; feet, sea-green (*Robinson and Kloss*).

Dimensions.—Total length, 18.6 in.; wing, 8.7 in.; tail, 2.7 in.; middle pair of feathers, about 10.5 in.; tarsus, 2.2 in.; bill from gape, 1.3 in.

Range in the Malay Peninsula.—Known from very few localities, but occurs as far south as Malacca. Not on any of the islands.

Extralimital Range.—Throughout India and the Indo-Chinese countries to South China, the Philippines and Formosa. Found in Java, Southern Borneo and Sumatra.

Nidification.—Nests and eggs are not recorded from the Malay Peninsula or from Siam, though in that country it probably breeds in June and July. In India it breeds in swamps, making a nest of reeds and rushes, often floating or semi-floating, and but little raised above the surface of the water. Different accounts give the number of eggs as from three to seven, though four seems to be the normal number. Oates describes them as quite plain, without a trace of any markings, and ranging through rich bronze, olive-brown, purplish brown, olive-green, clear brown and dull yellowish. He also states that they appear to bleach during the progress of incubation. The shell is extremely glossy, and very "peg-topped" in shape. The average dimensions of fifty eggs are given as 1.46 by 1.12 in.

Habits.—There are very few records of this bird from the Malay Peninsula. Kelham found it near Kuala Kangsar; Butler met with it on the lower reaches of the Pahang river, and Seimund has obtained two or three specimens in the vicinity of Kuala Lumpur; it has also occurred in Malacca. In the north it is probably commoner, and Robinson and Kloss secured a specimen at Koh Lak in Peninsular Siam. In Siam proper it is a fairly common breeding bird. It is probably, however, not so uncommon in Malaya as the records would

appear to indicate, as only in a few places are there sheets of water sufficiently large to suit it. Seimund's birds were obtained at the edges of old mining-holes, and the one bird Robinson saw in the Peninsula proper was at the edge of a slow-flowing stream running through swampy ground.

Wherever it occurs the species is said to be strictly sedentary, though it is significant that the only Malayan specimens are all in winter plumage. The extraordinarily elongated toes in this and other jacanas enable the birds to run about on broad-leaved water-plants. The food is insects found on plants, and small shells picked up by the edge of the water. The call is said to resemble the mewling of a kitten.

Family BURHINIDÆ

Stone-Plovers or Stone-Curlews

THIS small family has important cranial characters which separate it from the rest of the order; in many respects the group comes closest to the bustards. The bill is massive and nearly straight, varying in relative length in the different species. The legs are long, covered with hexagonal scales both in front and behind; there is no hind toe. Tail, short, less than half the length of the wing. Eyes, very large.

All the species are fair-sized birds (wing up to 11 in.), with plumage of dull neutral tints of pale brown, sandy buff and whitish, often much streaked with blackish brown. They are normally inhabitants of dry, semi-desert areas or upland downs, or of sandy seashores. One species, *Burhinus œdicnemus*, the Norfolk plover, is a British bird, which occurs in a modified form in India and Siam.

Only the following species occurs within our limits.

Orthorhamphus magnirostris magnirostris

The Australian Stone-Plover

œdicnemus magnirostris, Vieill., *Nouv. Dict. d'Hist. Nat.*, xxiii., 1819, p. 231 (Australia).

Esacus magnirostris, Oates in Hume's *Nests and Eggs Ind. Birds* (2nd ed.), iii., 1890, p. 334; Blanford, *Faun. Brit. Ind., Birds*, iv., 1898, p. 207.

Orthorhamphus magnirostris, Sharpe, *Cat. Birds, Brit. Mus.*, xxiv, 1896, p. 22; Oates, *Cat. Birds' Eggs, Brit. Mus.*, ii., 1902, p. 84.

Orthorhamphus magnirostris scommophorus, Oberholser, *Proc. U.S. Nat. Mus.*, 55, 1919, p. 193 (Tambelan Islands); Robinson and Kloss, *Journ. Nat. Hist. Soc. Siam*, v., 1921, p. 56.

Orthorhamphus magnirostris magnirostris, Stuart Baker, *Faun. Brit. Ind., Birds* (2nd ed.), vi., 1929, p. 81.

Malay Name.—Unrecorded.

Description.—*Adult.*—Sexes alike. Crown, hind neck, mantle, back, rump

and long tertials, pale earthy brown, darker on the head, with narrow dark shaft lines; upper tail coverts, with irregular dark bars. Lesser upper wing coverts along the inner margin of the wing, blackish; the next series, whitish at the base, succeeded by a narrow dark edging and pale grey at the tips; greater series, greyish brown, becoming white at the tips; lesser primary coverts, white, the greater ones, blackish brown. Primaries, blackish brown, largely white on the inner webs, extending on to the outer web in the two outermost. Inner primaries from the sixth, nearly pure white; secondaries, dark greyish brown, the bases and tips white, and with broad white margins to the inner webs; quill lining, under wing coverts and axillaries, white. Tail feathers, brown, broadly tipped with black, and with a broad subterminal white band, narrowly edged basally by black; all the feathers slightly freckled. Bill surrounded by a narrow white line; lores, a broad band on the sides of the crown, ear coverts and a patch at the angle of the jaw, black; a stripe from above the ear curved downwards, and separating the black crown stripe and the ear coverts, as also a large patch beneath the eye, white. Beneath, throat, white; neck and breast, ashy grey, with narrow dark shaft lines, strongest on the neck; belly, flanks and under tail coverts, whitish, tinged with buff, most strongly on the under tail coverts.

Immature.—Feathers of the upper surface with buffy edges; lesser upper wing coverts not so black, and white tips to greater series broader and more distinct, forming a bar on the wing; inner secondaries and tertiaries with narrow dark and light concentric edgings.

Soft Parts.—Iris, yellowish brown; bill, black, greenish yellow at base; tarsus, pale wax-yellow; toes more greyish slate.

Dimensions.—Total length, about 21 in.; wing, 10.6 in.; tail, 4.6 in.; tarsus, 3.4 in.; bill from gape, 3.25 in.

Range in the Malay Peninsula.—So far as the Malay Peninsula is concerned, only known from an adult male obtained on De Lisle Island, near the Pakchan Estuary. Mr E. Seimund secured another just outside our limits on Pulau Bintang, in the Rhio Archipelago, south of Singapore, in June 1908.

Extralimital Range.—From the Andamans and the Mergui Archipelago through Malaysia and the Philippines to the Moluccas, New Guinea, the Solomon Islands, tropical Australia and New Caledonia. It appears to be fairly common in the Andaman Islands and also in the Mergui Archipelago.

Nidification.—Has not been found breeding in the Malay Peninsula. On Little Cocos Island, in the Andamans, Hume obtained a single egg on 24th March, laid in a small depression in the coral sand a little above high-water mark; both parents were in attendance. There is also a single egg in the British Museum collection obtained near Port Blair, in the Andaman Islands, on 15th April. The eggs are oval, but not glossy; ground-colour, pale stone with large brownish-black blotches, with a few pale purplish subsurface markings generally distributed over the shell. Size, 2.6 by 1.78 in.

Habits.—On the two occasions we have met with this species the birds were in pairs on the seashore, near coral reefs, and very wild. Throughout its range this species, in contradistinction to the very similar *Esacus recurvirostris*, which

frequents large rivers, is exclusively an inhabitant of the seashore. The call is said to be harsh, but rather like that of a curlew. The present species would appear to be rather less nocturnal than many of the family.

Family DROMADIDÆ

Crab-Plovers

THIS family contains a single species only, whose affinities have been much discussed. The bill is stout, rather longer than the head, with the lower mandible slightly bent upwards. The legs are long, covered with transverse scutes, not scales, in front and behind; the toes are webbed. Tail short, about one-third the length of the wing.

Dromas ardeola

The Crab-Plover

Dromas ardeola, Paykull, *Konigl. Vet. Akad. Svensk. Handl.*, xxvi., 1805, pp. 182, 188, pl. 8 (India); Oates in Hume's *Nests and Eggs Ind. Birds* (2nd ed.), iii., 1890, p. 327; Sharpe, *Cat. Birds, Brit. Mus.*, xxiv., 1896, p. 28; Oates, *Cat. Birds' Eggs, Brit. Mus.*, ii., 1902, pp. 80, 363; Blanford, *Faun. Brit. Ind., Birds*, iv., 1898, p. 208; Robinson and Kloss, *Journ. Nat. Hist. Soc. Siam*, v., 1921, p. 56; Stuart Baker, *Faun. Brit. Ind., Birds* (2nd ed.), vi., 1929, p. 94.

Malay Name.—Unrecorded.

Description.—*Adult*.—General plumage, white; the mantle, black with a slight greenish gloss; the lower feathers elongate. Greater wing coverts and primaries, black, the latter ashy grey on the inner webs except at the tips; shafts, white; secondaries, white on the inner webs; eyelid, in front and behind, narrowly black.

Sexes alike.

Immature.—Inner scapulars and secondaries, brownish grey; the mantle, darker grey mottled with blackish. Hind part of head broadly streaked with black. Scapulars, inner secondaries, tail and occiput often remain brownish grey after the black mantle has been fully acquired.

Nestling.—Grey above, darker on the head and rump; beneath, whitish.

Soft Parts.—"Iris, deep brown; bill, black; feet, pale glaucous blue" (Hume).

Dimensions.—Total length, 16 in.; tail, 2.6 in.; wing, 8.5 in.; tarsus, 3.9 in.; bill from gape, 2.9 in.

Range in the Malay Peninsula.—Only known from three specimens shot by Mr E. Seimund out of a flock of six on the mud-flats near Pulau Pintu Gedong, Klang Straits, Selangor, on 24th September 1912. None of the specimens obtained was quite adult.

Extralimital Range.—The shores of the Indian Ocean from the Andamans

and Nicobars to Africa and the Mascarene Islands. Southern half of the Red Sea and the Persian Gulf.

Nidification.—The nesting habits of the crab-plover, which is not known to breed in Malaya, are highly peculiar. The bird is recorded as breeding in Ceylon, the Persian Gulf and on the coast of Somaliland from April to June. The single egg is laid at the end of a narrow burrow bored obliquely into a bank of sand or shell debris; it is plain white, very slightly glossy though somewhat rough to the touch, and in shape a rather broad oval. The egg is exceedingly large in relation to the size of the parent bird, the average dimensions according to Hume being 2.54 by 1.77 in.

Habits.—Mr E. Seimund states that the specimens he obtained on Klang Straits were very wild and ran with great speed on the mud. The food is crabs and other small crustaceans picked up from the mud and sand and in the edges of coral reefs. The note is variously described as a “low, rather musical call,” or a “raucous cry somewhat like that of a crow.”

Family GLAREOLIDÆ

Coursers and Pratincoles

THIS family consists of some thirty species, confined to the drier and hotter portions of the Old World, where they frequent sandy and stony plains, deserts, the beds of large rivers, etc.

The species vary in size from little larger than a lark to that of a golden plover, or larger; their plumage, in accordance with the type of country affected, is sandy, buff or brown, often with a dark collar on the breast.

Most of the species are strictly sedentary, but some of the genus *Glareola*, to which the only Malayan species belongs, are highly migratory.

Apart from the characters shown in the key, our species may be recognized by its swallow-like form, strongly forked tail, and by the fact that the inner margin of the middle claw is pectinate or comb-like.

Glareola pratincola maldivarum

The Eastern Pratincole or Swallow-Plover

Vol. I., p. 30.

Glareola (Pratincola) maldivarum, Forster, *Faun. Ind.*, 1795, p. 11 (Maldives); Herbert, *Journ. Siam Soc., Nat. Hist. Suppl.*, vi., 1926, p. 345.

Glareola orientalis, Leach, *Trans. Linn. Soc.*, xiii., 1821, p. 132, pl. 13; Oates, *Birds, Burma*, ii., 1883, p. 361; *id.* in Hume's *Nests and Eggs Ind. Birds* (2nd ed.), iii., 1890, p. 319; Kelham, *Ibis*, 1882, pp. 6, 7; Sharpe, *Cat. Birds, Brit. Mus.*, xxiv, 1896, p. 58; Blanford, *Faun. Brit. Ind., Birds*, iv., 1898, p. 214; Oates, *Cat. Birds' Eggs, Brit. Mus.*, ii., 1902, p. 78, pl. 3, figs. 5 and 6.

Glareola maldivarum maldivarum, Stuart Baker, *Faun. Brit. Ind., Birds* (2nd ed.), vi., 1929, p. 90.

Malay Name.—Kědidi padang : nok ee reit (*Siamese*).

Description.—*Adult.*—General plumage above, including the scapulars and tertials, earthy brown with an oily gloss ; back of the neck paler, forming an almost imperceptible collar ; lores, black. Primaries and outer secondaries, glossy black, the inner secondaries assimilating to the colour of the back, with narrow white edges to the tips. Shaft of the outer primary, whitish brown above, white below. Feathers at the angle of the wing, mingled black and white, tinged with rufous ; lesser under wing coverts and axillaries, chestnut, the greater ones black. Tail, white, the feathers broadly tipped with brownish black, broadening and becoming paler towards the centre pair ; upper tail coverts, white. Below, chin and foreneck, pale rufous, a narrow black line, starting from below the eye, encircling the lower throat. Upper chest and sides of the breast like the back, generally with paler edges to the feathers. Lower chest, pale rufous ; belly, under tail coverts and flanks, white.

Immature.—Feathers of the upper surface with paler edgings, tail feathers with blackish tips, the rest of the darker portion, earthy brown. Primaries much browner than in the adult ; ring round the throat very indistinct, and rufous on the lower chest absent. Older birds merely lack the rufous.

Soft Parts.—Iris, dark ; bill, black, crimson at base ; feet, greyish black.

Dimensions.—*Male.*—Total length, about 11 in. ; wing, 7.4 in. ; tail, 3.2 in. ; bill from gape, 1.05 in. ; tarsus, 1.4 in. Female rather smaller.

Range in the Malay Peninsula.—Sporadic in the Peninsula from north to south. Doubtful in Penang. Abundant in Singapore at certain seasons.

Extralimital Range.—Very widely spread in the plain country, India, Burma, Tenasserim, Siam and China to Manchuria. On migration, in the Andamans and Nicobars, Java, Borneo, Sumatra, Australia.

Nidification.—The swallow-plover is not a breeding bird in the Malay Peninsula. In Pegu, Oates describes the eggs as laid on the bare ground in sandy paddy-fields, two, or rarely three, being the clutch. The ground-colour is from nearly white to olive-stone, densely blotched and spotted with blackish brown. The average dimensions are 1.18 by 0.93 in.

Herbert (*loc. cit.*) gives a detailed account of the breeding habits in Central Siam, where the nesting season is from late February to the end of June. Two or sometimes three eggs constitute the clutch, the eggs being rather chalky and without gloss. The average dimensions agree with those given by Oates.

Habits.—The Eastern Pratincole occurs only in large open spaces, rice-fields in stubble and the like. It is a bird of passage with us, though it is probable that some birds spend two or three months in the Peninsula. In some years it is very common, while in others hardly a bird is to be seen. The birds spend most of their time on the ground, and when flushed do not fly very far, but in the morning and late afternoon make extended flights, especially after heavy rain, hawking for insects like a swallow.

Herbert says that they have quite a plover-like call, from which they derive their Siamese name. Usually they occur only in small flocks, up to a dozen or so, but at Kuala Kangsar, Perak, late in February, Kelham found them in immense numbers, evidently preparing for the spring migration.

In Singapore the same observer met with them in March and again in September and October, and notes their extreme tameness. The migration routes are unknown, and the species is not one of the birds occurring at the lighthouses during the autumnal migration.

Family CHARADRIIDÆ

Plovers, Stilts, Curlews, Sandpipers and Snipe

THE family *Charadriidæ* is divided by many authors into numerous sub-families, but for the purposes of this work we propose to recognize only four, in this respect following Blanford's arrangement in Volume IV. of the *Fauna of British India*, 1898.

KEY TO THE SUB-FAMILIES OF THE CHARADRIIDÆ

1	{	Nasal groove less than half the length of bill ;	
		bill never longer than head	<i>Charadriinæ</i> , p. 120
		Nasal groove more than half the length of bill	2
2	{	Tarsi reticulate throughout ; bill long	<i>Hæmatopodinæ</i> , p. 137
		Tarsi with transverse shields in front	3
3	{	Bill always longer than head ; eyes very large ;	
		no seasonal plumage	<i>Scolopacinæ</i> , p. 165
		Bill various ; eyes normal ; a more or less distinct	
		seasonal plumage	<i>Totantinæ</i> , p. 138

Family CHARADRIIDÆ

Sub-family CHARADRIINÆ

THIS sub-family includes the turnstones, the wattled plovers, spur-winged plovers and lapwings, the true plovers, ring-necked plovers and dotterels. The characters are varied, but all members of this group agree in having a bill that is never longer than the head and that, in most cases, is swollen at the tip. The tarsus is long, always covered with hexagonal scales, not plates, behind, and generally in front also ; the hind toe is absent in many species.

The plumage is black, white, brown, ashy and grey, or combinations of these colours.

Some species have spurs at the angle of the wing and coloured wattles on the face. Many of the forms are sedentary, but others are highly migratory ; the latter section has a very distinct breeding pelage.

Eggs are always four in number, very pointed at one end, and protectively coloured, being laid in the open. The young are hatched covered with down, and are able to run and fend for themselves at birth.

The family is a large one, cosmopolitan in range.

KEY TO THE SPECIES OF CHARADRIINÆ HERE DESCRIBED

- | | | | |
|----|---|--|---|
| 1 | { | With the bill not markedly swollen at the tips of mandibles | <i>Arenaria i. interpres</i> , p. 121 |
| | | With the bill markedly swollen at the tips of both mandibles | 2 |
| 2 | { | With a spur or knob at the angle of the wing | 3 |
| | | With no spur or knob at the angle of the wing | 4 |
| 3 | { | With a wattle in front of the eye | <i>Lobivanellus indicus atronuchalis</i> , p. 124 |
| | | With no wattle in front of the eye | <i>Hoplopterus duvaucelii</i> , p. 123 |
| 4 | { | With a hind toe | <i>Squatarola squatarola hypomelæna</i> , |
| | | With no hind toe | 5 [p. 125] |
| 5 | { | Plumage above spotted with yellow | <i>Pluvialis apricarius fulvus</i> , p. 126 |
| | | Plumage above not spotted with yellow | 6 |
| 6 | { | No complete white ring round the neck | 7 |
| | | A complete white ring round the neck | 9 |
| 7 | { | Bill stout; shaft of third primary partly white | 8 |
| | | Bill slender; shaft of third primary dark throughout; wing, 6.5 in. | <i>Charadrius asiaticus veredus</i> , p. 136 |
| 8 | { | Larger; bill from gape, 1 in.; wing about 5.5 in. | <i>Charadrius l. leschenaulti</i> , p. 128 |
| | | Smaller; bill from gape, 0.75 in.; wing about 5 in. | <i>Charadrius mongolus atrifrons</i> , p. 129 |
| 9 | { | A black or fuscus band across the fore-breast | <i>Charadrius dubius</i> subsp., p. 130 |
| | | A black or fuscus band on sides of fore-breast only | 10 |
| 10 | { | No black band on hind neck; larger, wing over 4 in. | <i>Charadrius alexandrinus</i> subsp., |
| | | A black band on hind neck (males); smaller, wing about 4 in. or less | [p. 132]
<i>Charadrius peroni</i> , p. 134 |

Arenaria interpres interpres

The Turnstone

Tringa interpres, Linn., *Syst. Nat.*, 10th ed., 1758, p. 148 (Gothland, Europe).

Arenaria interpres, Sharpe, *Cat. Birds, Brit. Mus.*, xxiv., 1896, p. 92;

Oates, *Cat. Birds' Eggs, Brit. Mus.*, ii., 1902, p. 3 ; Robinson and Kloss, *Journ. Nat. Hist. Soc. Siam*, v., 1921, p. 59.

Streptilas interpres, Blanford, *Faun. Brit. Ind., Birds*, iv., 1898, p. 223.

Arenaria interpres interpres, Stuart Baker, *Faun. Brit. Ind., Birds*, vi., 1929, p. 154.

Malay Name.—Unrecorded.

Description.—*Adult in winter plumage.*—Head above, brownish, with darker centres to the feathers, paler on the forehead ; nape, mantle, scapulars and inner wing coverts, blackish, with whitish or buffy-white margins to the feathers ; back, rump and upper longer tail coverts, white ; shorter upper tail coverts, black, forming a wide bar across the base of the tail. Primaries, black, with white shafts and whitish margins to the inner webs ; secondaries, blackish with white bases, the innermost feathers almost entirely white, the inner web clouded with greyish black ; greater secondary coverts with broad white tips, the inner webs entirely white, forming a bar on the wing. Lores, sides of the face, and ear coverts, brownish, a black spot in front of the eye and a whitish spot beneath it ; malar region, streaked black and white ; throat, chin and rest of the under surface, including the under tail coverts, under wing coverts and axillaries, white ; chest and sides of the breast, black, the feathers usually tipped and mottled with white and the white of the abdomen intruding as a V-shaped wedge in the middle of the breast. Tail feathers, white basally, blackish distally with buffy-white tips.

Adult in summer plumage.—Much brighter. Head, buffy white with black centres to the feathers. A narrow black band on the forehead to the front of the eye and joined to the black of the malar region ; mantle, wing coverts, scapulars and tertials, mixed black and rufous chestnut. Foreneck and sides of the breast, black.

Immature.—Birds in their first winter are dark brown on the upper surface with the wing coverts and scapulars edged with buff. Not markedly different from the adult in winter plumage.

Soft Parts.—Iris, brown ; bill, dark slate, greenish black or black ; feet, reddish orange.

Dimensions.—Total length, 8.5 in. ; wing, 6 in. ; tail, 2.5 in. ; tarsus, 1 in. ; bill from gape, 1 in.

Range in the Malay Peninsula.—Found sparingly along the west coast from the extreme north to Singapore Island. Information from the east coast scanty, but recorded from Patani and no doubt occurring elsewhere and on all the coastal islands.

Extralimital Range.—From its breeding-grounds in Greenland, across Northern Europe to Western Alaska, the turnstone wanders south in autumn along the coasts of most parts of the Old World, being found in winter in Africa, India, Indo-China, Japan, Sumatra, Java, Borneo, east to the Pacific coast of America and south to Australia. By some authors the far eastern form is regarded as separable from the typical European race, but we do not admit the distinction. A very closely allied race is found in America and the species is therefore almost cosmopolitan in its range.

Nidification.—The breeding-grounds are indicated above. Three or four heavily marked eggs are laid in a depression in the ground, which is sometimes lined with a few blades of grass.

Habits.—Only occurs in Malaya as a winter visitor. The limited series available indicates that adults arrive in very worn breeding plumage or a mixture of this and the winter dress by 11th September. Young birds as early as 24th September. There are birds in winter plumage collected in January so the species appears to winter in Malaya. Birds collected near Singapore on 5th May (latest spring date) are in nuptial dress, and two as early as 11th March are very chestnut on the upper parts and much in advance of some late April birds from the neighbouring Natuna Islands, which are still in winter plumage or only just beginning to change. The turnstone is not a common bird along the Malay coasts, although it occasionally occurs in large flocks. Not recorded for any inland locality.

Hoplopterus duvaucelii

The Spur-winged Plover

Charadrius duvaucelii, Lesson in Levrault's *Dict. Sci. Nat. Hist.*, xlii., 1826, p. 38 (Calcutta).

Hoplopterus ventralis, Oates in Hume's *Nests and Eggs Ind. Birds*, iii., 1890, p. 347; Sharpe, *Cat. Birds, Brit. Mus.*, xxiv., 1896, p. 159; Blanford, *Faun. Brit. Ind., Birds*, iv., 1898, p. 229; Oates, *Cat. Birds' Eggs, Brit. Mus.*, ii., 1902, p. 13; Robinson and Kloss, *Journ. Nat. Hist. Soc. Siam*, v., 1921, p. 59; Herbert, *Journ. Siam Soc., Nat. Hist. Suppl.*, vi., 1926, p. 347; Stuart Baker, *Faun. Brit. Ind., Birds* (2nd ed.), vi., 1929, p. 184.

Hoplopterus duvaucelii, Stuart Baker, *Faun. Brit. Ind., Birds* (2nd ed.), viii., 1930, pp. 518 and 696.

Malay Name.—Unrecorded.

Description.—Crown, a long crest, face, chin and throat, black, the black everywhere bordered by a white area. Foreneck, white, rest of the neck, fawny grey; mantle, back, scapulars and inner wing coverts, pale brown. Lesser wing coverts, black, greater series, white; primary coverts, black; wing quills, black with white bases, the latter only conspicuous on the secondaries. Tail, basal half white, apical half black. Breast, pale brown; rest of under surface, including lining of wing, white, but a conspicuous black patch on the centre of the abdomen. A large, sharp, recurved spur on the angle of the wing.

Soft Parts.—Iris, brown; bill, black; feet, brown or blackish brown, tinged reddish.

Dimensions.—Total length, 12 in.; wing, 8 in.; tail, 3.6 in.; tarsus, 2.6 in.; bill from gape, 1.35 in.

Range in the Malay Peninsula.—Peninsular Siam only.

Extralimital Range.—From India through Assam, Burma, Yunnan, French Indo-China and Siam to the north of the Malay Peninsula.

Nidification.—Not known to nest within our limits, but recorded as doing

so in Siam by Mr E. G. Herbert. The nest was on a sandbank of the Me Ping river at Paknampo, placed among driftwood and rubbish and difficult to find. The four eggs, taken on 15th March, are typically plover's in shape, without gloss, and with yellowish stone for the ground-colour. The markings consist of spots and occasional blotches of blackish brown, more closely distributed on the large end. Average size, 1.65 by 1.2 in.

Habits.—Probably rare and attaining its southern limit in Trang. Specimens from that locality obtained by Dr W. L. Abbott are in the United States National Museum, while the species was seen but not obtained by Robinson in the same district in 1909. In India it is said to keep entirely to the watercourses and to be very like a lapwing in its habits.

Lobivanellus indicus atronuchalis

The Burmese Wattled Lapwing

Vol. I., p. 32.

Lobivanellus atronuchalis, Blyth, in Jerdon, *Birds Ind.*, iii., 1864, p. 648; Kelham, *Ibis*, 1881, p. 531; *id. op. cit.*, 1882, p. 10; Oates in Hume's *Nests and Eggs Ind. Birds* (2nd ed.), iii., 1890, p. 344.

Sarcogrammus atrinuchalis, Sharpe, *Cat. Birds, Brit. Mus.*, xxiv., 1896, p. 152; Blanford, *Faun. Brit. Ind., Birds*, iv., 1898, p. 226; Oates, *Cat. Birds' Eggs, Brit. Mus.*, ii., 1902, p. 10.

Lobivanellus indicus atronuchalis, Herbert, *Journ. Siam Soc., Nat. Hist. Suppl.*, vi., 1926, p. 347; Stuart Baker, *Faun. Brit. Ind., Birds* (2nd ed.), vi., 1929, p. 189.

Malay Names.—Burong duit-duit; burong minta duit: nok too wit (*Siamese*).

Description.—*Adult.*—A small blunt spur at the angle of the wing. Head and neck all round, black; ear coverts and a small area in front of and behind them, white; remainder of the under surface and under tail coverts, white, with a slight fawn tinge in newly moulted birds. A narrow white collar round the hind neck; mantle, back, scapulars and secondary coverts, brown, with an oily gloss, purplish on the median coverts; greater secondary coverts with broad white tips, forming a bar on the wing. Primaries and primary coverts, black, secondaries black, white at the bases, the amount of white increasing on the inner ones, which are mostly white. Upper tail coverts and tail, white, the latter with a median black bar, the centre pair of feathers with the black bar edged with greyish brown towards the base, and with a brownish tip. Under wing coverts and axillaries, white, the quill lining blackish, the bases of the primaries white.

Immature.—The throat white, and the feathers of the upper surface with lighter margins; crown of the head, brownish black.

Soft Parts.—Iris, dark hazel, or hazel-brown; eye wattles, lappets and terminal half of bill, crimson, distal half, black; tarsi, pale whitish yellow; feet, greenish yellow. Oates (*Birds, Burma*, ii., 1883, p. 374) records the irides as crimson. All our birds have them as above.

Dimensions.—Total length about 12.5 in. ; wing, 8.2 in. ; tail, 4.35 in. ; tarsus, 3 in. ; bill from gape, 1.3 in.

Range in the Malay Peninsula.—Throughout the Peninsula. The islands of Junk Zeylon (Salanga), the Langkawi group and those in the Bandon Bight. Not recorded from Penang. At one time in Singapore but now extinct there.

Extralimital Range.—The Indo-Chinese countries, north to Manipur and east to Cochin-China ; Sumatra.

Nidification.—The nesting season is in May and June, and four eggs are laid, generally in a small hollow on a sandbank in a river-bed. They are very pointed at one end, stone or buffy brown in ground-colour, with large blotches of black and olive-brown or green, some of the marks appearing beneath the surface of the shell. They measure about 1.73 by 1.23 in.

Habits.—Common and resident throughout the Peninsula, this lapwing is naturally much more abundant in the northern and eastern portion, where the terrain is more suitable to the bird's habits. It is essentially a bird of open spaces, frequenting sandy plains near the coast, ploughland along the courses of the larger rivers, and patches of grazing-land surrounded by bushes and secondary jungle, especially where there are shallow pools of standing water. In such situations one finds it in parties of five or six up to fifteen or twenty individuals. The birds are not particularly shy, but when shot at once or twice take flight to some considerable distance. The food is vegetable matter, worms, grubs, insects, and small molluscs found in damp situations, and the call is a plaintive cry, uttered generally on the wing and well rendered by the vernacular name, *duit-duit*, or *mintu duit*.

Note.—Doubts may be cast on the occurrence of this bird in Singapore. Kelham's specimens, which were carefully described, were shot in a swampy valley behind the Tanglin barracks, on 21st September 1879.

Squatarola squatarola hypomelæna

The Eastern Grey Plover

Charadrius hypomelus, Pallas, *Reise d. Versch. Prov. d. Russ. Reich.*, iii., 1776, p. 699 (Arctic coast of Siberia).

Squatarola helvetica, Sharpe, *Cat. Birds, Brit. Mus.*, xxiv., 1896, p. 182 (part) ; Blanford, *Faun. Brit. Ind., Birds*, iv., 1898, p. 236 (part) ; Robinson and Kloss, *Journ. Nat. Hist. Soc. Siam*, v., 1921, p. 60.

Squatarola squatarola hypomela, Stuart Baker, *Faun. Brit. Ind., Birds* (2nd ed.), vi., 1929, p. 157.

Malay Name.—Kědidi bēsar.

Description.—*Adult in winter plumage.*—General colour above, dark earthy brown, the feathers edged and indented with white, slightly darker towards the tips and with very fine shaft stripes. Rump and upper tail coverts, white, variably barred with brown ; forehead, lores and a stripe over the eye, white, a brown spot in front of the eye ; sides of the face, ear coverts and neck, white, with fine brown streaks. Wing coverts more barred with white, the median

and greater series edged with white. Primary coverts, primaries and secondaries, brownish black, with a purplish gloss in freshly moulted birds, the primaries with their shafts white except at the tips, the inner ones with the white extending on to the outer webs; inner aspect of the quills extensively white on the inner webs; under wing coverts, white, greyish towards the edge of the wing; *axillaries*, black, sometimes tipped with white. Tail feathers white, with broad brown bars, the outer two pairs sometimes almost unbarred. Beneath, white, the feathers of the neck and breast variably streaked and centred with brown, the outer under tail coverts, toothed and barred with brown, chiefly on the outer web.

Adult in summer plumage.—Upper parts, black, mottled with white; lower abdomen and under tail coverts, white; rest of the under surface, black.

Immature.—Very like the adult in winter, but the upper parts spangled with golden buff. In this plumage the bird is not unlike the golden plover, but can always be separated by the presence of a small hind toe and black axillaries.

Range in the Malay Peninsula.—The west coast from north to south; probably the east coast also, but no records.

Extralimital Range.—The grey plover breeds in the circumpolar regions, migrating after the breeding season to the southern hemisphere and then being found over almost the whole world (South America, Africa, Malaysia, Australia, etc.). Birds breeding in the far eastern part of the range are slightly larger than others of the species and are regarded as a distinct race; the western limit of this race is not precisely defined, though some Sind and Mesopotamia birds appear to be referable to it and not to the typical European race.

Nidification.—The four very plover-like eggs are laid in a depression in the ground. It is presumed that the birds visiting Malaya in winter breed in North-Eastern Siberia; the eastern race also breeds in the Aleutian Islands and Alaska.

Habits.—Not nearly so common in the Malay Peninsula as the golden plover, and unlike it purely a shore bird, never found inland. It is found from the middle of September until as late as the middle of April. The majority of specimens examined are adults in winter plumage, although some October and November birds retain odd black feathers on the under parts. Birds in full breeding plumage are never seen in the Malay Peninsula, but the lower black plumage is partially acquired before birds leave for the north in April. It seems not to associate in such large flocks as the golden plover.

Pluvialis apricarius fulvus

The Eastern Golden Plover

Vol. I. p. 34.

Charadrius fulvus, Gmel., *Syst. Nat.*, i., 1788, p. 687 (Tahiti); Dresser, *Birds of Europe*, vii., 1871, p. 443, pl. 517, figs. 2 and 3; Kelham, *Ibis*, 1882, pp. 8, 189; Blanford, *Faun. Brit. Ind.*, *Birds*, iv., 1898, p. 234.

Charadrius dominicus, P. L. Müll.: Sharpe, *Cat. Birds, Brit. Mus.*, xxiv., 1896, p. 195.

Pluvialis dominicus fulvus, Stuart Baker, *Faun. Brit. Ind., Birds* (2nd ed.), vi., 1929, p. 178.

Malay Name.—Burong kəriyut.

Description.—*Adult in winter plumage.*—General colour above, mottled black, whitish, dirty buffy brown and golden yellow, the scapulars and wing coverts earthy brown, barred and toothed with white; forehead and superciliary stripes, buffy white, sometimes with narrow brown shaft stripes; ear coverts, dull brown; sides of the face and throat, pale fulvous, streaked with brown; chest, sides of the breast and flanks, whitish brown, streaked and edged with earthy brown; middle of the breast, belly and under tail coverts, white, the latter faintly and irregularly barred with brown. Primaries, black, the median portions of the shafts white; primary coverts, brownish black, broadly edged with white, secondaries the same, narrowly edged on the inner webs with white. Wing lining, axillaries and under wing coverts, smoke-grey, the latter with paler edges. Tail, dark brown, brownish grey towards the base, the tip toothed on both webs of the feathers with white or yellowish white.

Adult in breeding plumage.—The under surface in adult males is deep black, except on the flanks and under tail coverts, which are white. Black element in the upper plumage in greater proportion, and the golden-yellow spots larger and brighter. Forehead, superciliaries and a band on each side of the neck, white. Females never have the black under surface so uniform.

Soft Parts.—Irides, dark hazel; bill, greenish black, paler at base; feet, plumbeous black, or black with a greenish tinge, occasionally pale greyish green.

Dimensions.—Total length, about 10 in.; wing, 6.3 in.; tail, 2.4 in.; tarsus, 1.6 in.; bill from gape, 1.2 in.

Range in the Malay Peninsula.—Probably along both coasts of the Peninsula and on all the islands; certainly in Penang, Junk Zeylon (Salanga) and Singapore.

Extralimital Range.—The whole of Asia, except the more western portion, and the greater portion of the Pacific and Australia. In America a slightly larger form occurs. The European golden plover also differs in being larger, with pure white, not smoky grey, axillaries.

Nidification.—Breeds on the Siberian tundras, in Kamchatka and other sub-Arctic localities in Northern Asia. Never in the Malay Peninsula.

Habits.—Common in the Malay Peninsula and on the larger adjacent islands from September to May. It is found in large flocks on the coast and also in open plains and fallow ricefields in the interior, but never, of course, in wooded country. The call is *kəriyut-kəriyut*, several times repeated. In Singapore, Kelham records the bird as common from October to April and it is fairly abundant at this season on the golf links and racecourse, Kuala Lumpur.

Towards March, specimens may be obtained which have commenced to acquire the black nuptial plumage, but birds in full livery are rare, though Kelham records one from Kuala Kangsar, shot on 12th April.

Even on the coast this plover is quite good eating, but, like many birds frequenting the mud-flats, it has to be skinned before cooking.

*Charadrius leschenaulti leschenaulti***The Large Sand-Plover**PLATE 13 (*lower figure*)

Charadrius leschenaulti, Lesson, *Dict. Sci. Nat.* (ed. Levrault), xlii., 1826, p. 36 (Pondicherry, India).

Ochthodromus geoffroyi, Sharpe, *Cat. Birds, Brit. Mus.*, xxiv., 1896, p. 217 (part); Oates, *Cat. Birds' Eggs, Brit. Mus.*, ii., 1902, p. 20.

Ægialitis geoffroyi, Blanford, *Faun. Brit. Ind., Birds*, iv., 1898, p. 237; Robinson and Kloss, *Journ. Nat. Hist. Soc. Siam*, v., 1921, p. 60.

Cirrepedesmus leschenaulti, Stuart Baker, *Faun. Brit. Ind., Birds* (2nd ed.), vi., 1929, p. 175.

Malay Names.—Kědidi; kěpala bėsar; kěpala rapang (*Kedah*).

Description.—*Adult in winter plumage.*—Forehead and superciliary stripes, white; a stripe from the lores running under the eye to the ear coverts, brown; plumage above, greyish brown, the feathers mostly with thin, dark shaft stripes and paler edges; greater wing coverts with broad white tips. Primaries, primary coverts and secondaries, brownish black, the primaries with white shafts; except near the tips the inner webs of all and part of the outer web of the inner primaries, whitish; secondaries tipped and edged with white. Tail feathers, brown, tipped with white, the outermost, mainly white; lateral upper tail coverts, white. Under surface, white, an interrupted smoky brown band across the breast, sometimes, though rarely, complete. Axillaries, white.

Adult in summer plumage.—Plumage above, paler brown, washed with rufous; forehead, mostly black; lores, a streak under the eye and the ear coverts, black; crown, hind neck, sides of the neck, and a broad band across the breast, pale rufous.

Immature.—The immature bird, which we have not yet obtained in Malaya, is like the adult in winter, but has paler fringes on feathers of upper parts and rusty fringes on breast feathers.

Soft Parts.—Iris, brown; bill, black; feet, brownish or greyish black, sometimes dull greyish yellow; the toes, darker.

Dimensions.—Total length, 8.5 in.; wing, usually between 5.25 and 5.5 in., usually nearer the larger figure and sometimes a little more; tail, 2.3 in.; tarsus, 1.4 to 1.55 in.; bill from gape, 1.2 in.

Range in the Malay Peninsula.—On the coasts and adjacent islands.

Extralimital Range.—From its breeding-grounds in Eastern Asia this plover moves south in the autumn to the east coast of Africa, India, throughout Malaysia to Australia, etc. Dr C. B. Ticehurst has recently recognized a western race, the breeding-grounds of which are not yet known.

Nidification.—Little is known concerning the details of the nidification.

Habits.—Found along the coast of the Peninsula from August to May, usually in small parties of three or four, on sandy shores and on the edge of mangrove, but commonest where there is little mud and a large expanse of sand. Specimens in the Raffles Museum are dated from 11th September to

23rd May; all appear to be adults in winter plumage. We have seen birds killed locally at the end of March changing into the nuptial plumage, but others collected in April and May show no signs of changing. In a specimen from the Natuna Islands, collected on 17th April, there are chestnut feathers on the gorget and upper surface. In a bird from Siam, dated 29th March, the change is almost complete.

The bird figured is an adult female (four-fifths natural size) in winter plumage, collected in the Langkawi Islands, Straits of Malacca, on 13th December 1912.

Charadrius mongolus atrifrons

The Small Sand-Plover

PLATE 13 (*upper figure*)

Charadrius atrifrons, Wagler, *Isis*, 1829, sp. 650 (Bengal).

Ochthodromus pyrrhotorax, Sharpe, *Cat. Birds, Brit. Mus.*, xxiv., 1896, p. 226.

Egialitis mongolica, Blanford, *Faun. Brit. Ind., Birds*, iv., 1898, p. 238 (part); Robinson and Kloss, *Journ. Nat. Hist. Soc. Siam*, v., 1921, p. 61.

Cirrepedesmus mongolus atrifrons, Stuart Baker, *Faun. Brit. Ind., Birds* (2nd ed.), vi., 1929, p. 174.

Malay Name.—Kēdidi.

Description.—Almost identical both in summer and winter plumage with *C. leschenaulti*, but smaller, the difference in the bills being very marked. In immature birds there is a wash of rich buff on the breast, and the upper parts, especially the wing coverts, have buff margins.

Soft Parts.—Iris, brown; bill, black; feet, slaty or brownish slate; toes often darker.

Dimensions.—Total length, 7.25 in.; wing, usually about 5 in., but often rather less; tail, 2.1 in.; tarsus, 1.25 to 1.4 in.; bill from gape, 0.75 in.; exposed culmen, 0.7 to 0.8 in.

Range in the Malay Peninsula.—Common on sandy shores throughout the Malay Peninsula in the winter months.

Extralimital Range.—The breeding-grounds are in the highlands of Central Asia, the Kirghis Steppes, Tibet, etc. In winter it is found south to Africa, India, through Malaysia to Java. An allied race, the typical *mongolus*, has its breeding-grounds to the east of *atrifrons*, and is found as far south as Australia in winter; this eastern form occurs as far west as North Borneo.

Nidification.—Mr B. Osmaston describes the breeding habits of this plover on 27th June, in Further Kashmir, as follows: "The birds are extremely difficult to follow, as they run about at great speed on the sand, and their eggs, three in number, are extraordinarily difficult to locate. One may pass them over and over again at close quarters without seeing them." The clutch is three eggs, "pale *café au lait*, rather densely speckled and spotted with dark brown. The eggs are laid in little saucer-shaped hollows in the sand, scraped out by the bird generally at some considerable distance from the water."

Habits.—The small sand-plover is very common on the coasts of the Peninsula and the small islands from September to, normally, April or May, and occasionally, though rarely, is found inland; sometimes it congregates in large flocks. The series in the Raffles Museum shows that old birds changing from the nuptial plumage into winter dress arrive as early as 3rd September; in this month also appear birds of the year and other adults already in winter plumage. Some birds start to change into nuptial plumage at the end of March, but others in winter dress can be killed in all months of the winter up to April, and one very late bird, collected on Koh Pennan, in the Bight of Bandon, on 1st June, still shows no signs of changing. Specimens from the neighbouring Natuna Islands are beginning to assume the nuptial plumage in the latter half of April, and others from Siam are completely changed by the last week in that month, although others from the same locality collected in the first week of May are not so forward.

The eastern form of this species, *C. m. mongolus*, has also been recorded from "Malacca," but all the birds we have seen from our area are *atrifrons*, from which *mongolus* differs in having a white band across the forehead in breeding plumage and slightly shorter tarsi; in winter, however, the two forms are difficult to separate.

The bird figured is an adult female (two-thirds natural size) in winter plumage, collected on Koh Muk, off the west coast of Siam, on 4th January 1917.

Charadrius dubius curonicus

The Little Ringed Plover

Charadrius curonicus, Gmelin, *Syst. Nat.*, i., 1789, p. 692 (Curonia, Baltic Prov. of Russia).

Ægialitis dubia (part), Sharpe, *Cat. Birds, Brit. Mus.*, xxiv, 1896, p. 263; Blandford, *Faun. Brit. Ind., Birds*, iv., p. 241; Oates, *Cat. Birds' Eggs, Brit. Mus.*, ii., 1902, p. 25.

Ægialitis dubius curonicus, Robinson and Kloss, *Journ. Nat. Hist. Soc. Siam*, v., 1921, p. 61.

Charadrius dubius curonicus, Stuart Baker, *Faun. Brit. Ind., Birds* (2nd ed.), vi., 1929, p. 171.

Malay Name.—Kědidi.

Description.—*Adult male.*—General colour above, pale brown; the lateral upper tail coverts, white. Lores, base of the forehead, a stripe from the base of the bill to below the eye and including the ear coverts, a broad band between the eyes and a narrow superciliary stripe, black. Forehead, chin, throat, and a collar round the neck, white; a broad band of black across the chest; rest of the under surface, white. Secondary coverts as the back; primary coverts and primaries, blackish brown, the outermost primary with the shaft white. Centre tail feathers, dark brown, with a blackish subterminal band and a white tip; outer feathers, mostly white, with a blackish brown area on the inner web.

Adult female.—Resembles the male, but the black superciliary stripe almost

obsolete ; the black collar on the hind neck not so distinct, and the black on the foreneck often much mixed with brownish.

Immature.—No black band on forehead, the buffy white of the forehead grading into the brown of the crown. Black areas of the sides of the head replaced by brownish. General tone of upper surface more rufescent ; the feathers margined with buffy white ; black collar on hind neck absent and that on the foreneck replaced by dark brownish.

Soft Parts.—Iris, brown ; edge of the eyelid, yellow ; bill, black, with the base of the lower mandible yellow ; feet, fleshy yellow, dirty-flesh, or dull yellow ; the joints and toes perhaps greyish.

Dimensions.—Total length, 6·8 in. ; wing, 4·4 to 4·9 in. ; tail, 2·4 in. ; tarsus, 1 in. ; bill from gape, 0·6 in.

Range in the Malay Peninsula.—Widely spread from Peninsular Siam in the north to Johore in the south.

Extralimital Range.—According to Dr Hartert and Miss A. C. Jackson, this race breeds in the greater portion of Europe, in North-West Africa north of the Sahara, on the North Atlantic Islands, and through Northern Central Asia, apparently to East Siberia and Japan. Winters in Africa, India, and in the Sunda Islands. The typical form, *C. dubius dubius*, distinguished by its rather larger bill, is said to breed, by the same authors, in the Philippine Islands, in Hainan, Formosa, and apparently parts of South China ; it also occurs in the Japanese Islands, and, as Mr Stuart Baker records specimens from Mergui, in Tenasserim, it may be expected to occur in the Malay Peninsula, but we have seen no examples of it from our area.

Nidification.—Does not breed in Malaya ; the breeding habits of the resident race are described under the next heading.

Habits.—By no means common in the Peninsula, occurring in small numbers from September to April. Found inland on open ground and rice stubbles and by the sides of pools and rivers, though not in swamps. Not commonly met with on the sea-coast.

Charadrius dubius jerdoni

The Little Ringed Plover (Tropical Race)

Ægialitis jerdoni, Legge, *Proc. Zool. Soc.*, 1880, p. 39 (Ceylon) ; Oates in Hume's *Nests and Eggs Ind. Birds* (2nd ed.), iii., 1890, p. 340.

Ægialitis dubia (part), Sharpe, *Cat. Birds, Brit. Mus.*, xxiv., 1896, p. 263 ; Oates, *Cat. Birds' Eggs, Brit. Mus.*, ii., 1902, p. 25.

Ægialitis dubius curonicus (part), Robinson and Kloss, *Journ. Nat. Hist. Soc. Siam*, v., 1921, p. 61.

Charadrius dubius jerdoni, Stuart Baker, *Faun. Brit. Ind., Birds* (2nd ed.), vi., 1929, p. 171.

Malay Name.—Kēdidi.

Description.—Like *Charadrius dubius curonicus* but smaller ; the base of the lower mandible brighter yellow. It has also been claimed that the general colour is paler, the black frontal band at the base of the bill narrower, and the

orbital skin better defined and a brighter yellow, but these last-named characters require confirmation.

Soft Parts.—Only differing from those of *curonicus* as noted above.

Dimensions.—The wing range is from 4 to 4.5 in. against 4.4 to 4.9 in. in the larger race. The measurements overlap slightly, as do those of the bill and tarsus, but *curonicus* averages rather larger in all dimensions.

Range in the Malay Peninsula.—The only specimens we attribute to this form, without hesitation, are from Sitiawan in Perak (*A. T. Edgar*), Kuala Tembeling in Pahang (*F. N. Chasen*) and Kuala Lumpur in Selangor (*E. Seimund*).

Extralimital Range.—Said to breed throughout Ceylon, India and Burma east to French Indo-China; also recorded from Sumatra, Borneo and as far east as New Guinea. Not recorded from Java.

Nidification.—There is no record of this bird breeding in the Peninsula, but it probably does so. In India, according to Mr Stuart Baker, it usually breeds during March and April, the eggs, three or four in number, generally being laid on sandbanks, in the beds of rivers, less often on the banks of the rivers themselves, and, very occasionally, on waste land or sandy, stony fields. Normally the eggs are buffy in colour, with fine dark markings. Size about 1.1 by 0.83 in.

Habits.—Very little is known about this bird in Malaya; it occurs, in the winter months, in the same flocks as *curonicus*, and like it seems to prefer inland districts to the sea-coast.

Note.—The majority of the birds of this species occurring in the Peninsula are, without doubt, the migratory *curonicus*, but a few examples must, on a consideration of size alone, be referred to *jerdoni*; these also have the base of the mandible brighter than the others. Modern authors are agreed in recognizing a small, tropical, resident race of this plover, and it seems more than likely that it is resident in Malaya, but the dates of our birds (March, April, November and December) are not conclusive. Dr C. B. Ticehurst seems to be the last ornithologist to handle both races in the flesh (*Ibis*, 1923, p. 653). Information about the status of this bird in the Malay Peninsula is badly needed, and fewer problems are more worthy the attention of amateur naturalists in the Malay States.

Charadrius alexandrinus alexandrinus

Charadrius alexandrinus dealbatus

The Kentish Plover

Charadrius alexandrinus, Linn., *Syst. Nat.*, 10th ed., 1758, p. 150 (Egypt).

Ægialitis alexandrina (part), Sharpe, *Cat. Birds, Brit. Mus.*, xxiv., 1896, p. 275; Blanford, *Faun. Brit. Ind.*, *Birds*, iv., 1898, p. 240; Oates, *Cat. Birds' Eggs, Brit. Mus.*, ii., 1902, p. 26.

Leucopoliis alexandrinus alexandrinus, Stuart Baker, *Faun. Brit. Ind.*, *Birds* (2nd ed.), vi., 1929, p. 161.

Chinese Race (*C. a. dealbatus*)

Ægialitis dealbatus, Swinhoe, *Proc. Zool. Soc.*, 1870, p. 138 (Hainan).

Ægialitis alexandrina (part), Sharpe, *Cat. Birds, Brit. Mus.*, xxiv, 1896, p. 275; Blanford, *Faun. Brit. Ind., Birds*, iv., 1898, p. 240; Oates, *Cat. Birds' Eggs, Brit. Mus.*, ii., 1902, p. 26.

Ægialitis alexandrinus dealbatus, Robinson and Kloss, *Journ. Nat. Hist. Soc. Siam*, v., 1921, p. 62.

Leucopoliis alexandrinus dealbatus, Stuart Baker, *Faun. Brit. Ind., Birds* (2nd ed.), vi., 1929, p. 163.

Malay Name.—Kēdidi.

Description.—*Adult in winter plumage.*—Forehead, superciliary stripe, sides of the head, chin, throat, a complete collar round the neck, and entire under parts including the wing lining, white. Upper parts, earthy brown, broken only by the white collar running across the hind neck; the feathers with slightly paler edges. An earthy-brown patch on each side of the breast, occasionally nearly meeting in the centre line. Greater coverts, brown broadly edged with white; primary coverts, blackish, tipped with white. Primaries, dark brown, paler on the inner web; the shafts largely white; inner primaries, white at the base on the inner web. Secondaries, brown with white tips, and largely white, especially so in the inner secondaries, on the inner webs; tertiaries, brown like the back. Centre pairs of tail feathers, brown; outer pairs, white.

Adult male in breeding plumage.—Quite distinct. Forehead, white, followed by a broad black bar across the crown; rest of upper surface, brown washed with rufous. A black loreal line and a black patch on the ear coverts. Patches on each side of the breast, black, not brown.

Adult female in breeding plumage.—Less rufous on the crown and the black bar absent. Patches on the sides of the breast, brown with a rufous tinge. There is very little difference between this plumage and that of both sexes of the adult in winter.

Immature.—Like the adult in winter, but the feathers of the upper parts narrowly edged with pale buff.

Soft Parts.—Iris, brown; bill, black; feet, slaty, grey-black with darker toes, or greyish yellow with grey-black toes.

Dimensions.—Total length, 6.5 in.; wing, 4.25 to 4.6 in.; tail, 2 in.; tarsus, 1.1 to 1.2 in.; culmen rarely longer than 0.6 in. in *C. a. alexandrinus*, usually over 0.65 in. in *C. a. dealbatus*.

Range in the Malay Peninsula.—We have seen very few local specimens of the Kentish plover; our small series was collected on the coast of Selangor, and on Singapore Island, where both races occur.

Extralimital Range.—The typical form breeds in Europe, North Africa, across Central Asia, east to Korea; in winter it moves south to South Africa, India and Malaysia. The eastern race (*dealbatus*) breeds in South China, Hainan, Formosa and, apparently, Japan. It also migrates in autumn, and in its winter

