

**NEMORON NOMAS, A NEW GENUS AND NEW SPECIES OF
TERRESTRIAL CRAB (CRUSTACEA: DECAPODA:
BRACHYURA: POTAMIDAE) FROM CENTRAL VIETNAM**

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ABSTRACT. - A new genus and new species of terrestrial crab of the family Potamidae, *Nemoron nomas*, is described from central Vietnam. The new genus differs from the *Phaibulamon* Ng, 1992, mainly in having a very differently structured male anterior thoracic sternum and male first pleopod.

INTRODUCTION

Louis Deharveng recently sent me two specimens of an interesting long-legged terrestrial crab of the family Potamidae from a forest in central Vietnam which could not be identified with any known genus or species. The specimens resembled *Phaibulamon stilipes* Ng, 1992, a cavernicolous species described from Thailand, but differed so markedly in the form of the male first pleopod that it is quite unlikely that they are congeneric. As such, they are here described as a new genus and new species, *Nemoron nomas*.

The type specimens are deposited in the Zoological Reference Collection (ZRC), Department of Zoology, National University of Singapore. The abbreviations G1 and G2 are used for the male first and second pleopods respectively. The terminology used here essentially follows that used by Ng (1988).

TAXONOMY

FAMILY POTAMIDAE ORTMANN, 1896

***Nemoron*, new genus**

Type species. - *Nemoron nomas*, new species, by present designation.

Diagnosis. - Epigastric and postorbital cristae prominent, rugose, not sharp. External orbital angle acutely triangular. Third maxilliped exopod without flagellum, not reaching upper edge of ischium. Cheliped with relatively elongate merus. Ambulatory legs long. Thoracic sternites 3 and 4 not demarcated by any suture. G1 slender, sinuous; distal part of subterminal segment neck-like; terminal segment with well developed dorsal fold. G2 distal segment ca. 0.62 times length of basal segment.

Etymology. - The name is derived from the Greek "Nemos" for forest, in arbitrary combination with the genus name *Potamon*. Gender neuter.

Remarks. - The external features of *Nemoron nomas*, especially with regards to the general carapace shape, ambulatory legs and third maxillipeds are superficially very similar to those of the Thai *Phaibulamon stilipes* Ng, 1992 (type species of monotypic genus). The G1s of the two species however, differ very markedly. In *N. nomas*, it is gently sinuous, with the terminal segment tapering, gently curving outwards and possessing a pronounced dorsal fold. In *P. stilipes*, the G1 is stouter and bent sharply at about 90° outwards, the terminal segment gently curving upwards and has no trace of a dorsal fold. In fact, the G1 of *N. nomas* more closely resembles those of Thai and Indo-Chinese genera like *Thaipotamon* Ng & Naiyanetr, 1993, and *Pudaengon* Ng & Naiyanetr, 1995, although their carapace and legs are very different (Ng, in press a; Ng & Naiyanetr, 1993, 1995). The carapace shape of *Nemoron* somewhat resembles specimens referred to *Ranguna turgidula* (Alcock, 1909) by Bott (1970) but there are some taxonomic problems here. The real *Potamon turgidulum* is probably a very different species, with those illustrated by Bott (1970) actually belonging to an undescribed genus (see Ng, in press b). The G1 of the "*P. turgidulum*" of Bott (1970: pl. 38 figs. 36, 37) however, are quite different, being short and having an unusually structured terminal segment (see Ng, in press b). On the basis of the G1 structure, it seems best to refer *N. nomas* to its own genus. The similarity in general external morphology of freshwater crabs is well known, with convergence often being rampant (see Ng, 1988). Similar-looking taxa may not be monophyletic or closely related, their similar morphology being a consequence of their habits and ecology (see Ng, 1989, 1991).

Other than the G1 differences, *N. nomas* also differs from *P. stilipes* in having the lateral margins of the male telson more deeply concave, the complete absence of a suture separating thoracic sternites 2 and 3, and less significantly, the ambulatory legs are also substantially shorter proportionately. The separation between thoracic sternites 2 and 3 in *N. nomas* is hardly discernible, being represented by a very shallow and faint groove, without trace of a suture. Their third maxillipeds also differ. In *N. nomas*, the lateral margins of the ischium are generally more convex, resembling those of the genera *Thaipotamon* (see Ng & Naiyanetr, 1993). That of *P. stilipes* is more quadrate. It is also noteworthy that the median groove on the ischium of the third maxilliped in *N. nomas* is very shallow and relatively indistinct compared to that of *P. stilipes*.

Two other genera of long-legged potamids are present in China and Indo-China, viz. *Tiwaripotamon* Bott, 1970 s. str., and *Neotiwaripotamon* Dai & Naiyanetr, 1994 (see Ng, 1992; Ng & Takeda, 1992; Dai & Naiyanetr, 1994). Members of both these genera however, have proportionately broader carapaces, longer third maxillipedal exopods which still have a short or vestigial flagellum, broader male abdomens and simple G1 terminal segments which are gently upcurved and without any dorsal fold (see Bott, 1970; Dai & Naiyanetr, 1994). The poorly known species described by Rathbun (1904) from northern Vietnam, *T. araneus*, has been tentatively retained as a distinct taxon in *Tiwaripotamon* (see Ng, 1992).

***Nemoron nomas*, new species**

(Figs. 1-4)

Material examined. - Holotype male (23.7 by 20.3 mm) (ZRC 1996.94), station Viet 062, Phong Nha, Hang Toi, 35 m above sea level, in cave, about 300 m inside, Quang Binh Province, Vietnam, coll. L. Deharveng, A. Bedos & Levet, 11 Jan.1995.

Others - 1 female (25.4 by 21.3 mm) (ZRC 1996.95), station Viet 067, in forest near Cha Noi, Quang Binh Province, Vietnam, coll. L. Deharveng, A. Bedos & Levet, 9 Jan.1995.

Description of male holotype. - Carapace transverse, dorsal surfaces glabrous, not inflated. Epigastric cristae distinct, very rugose, not sharp, separated by shallow but distinct V-shaped groove which extends to raised, rugose mesogastric region; postorbital cristae strong, rugose, does not reach epibranchial tooth, separated from epigastric cristae by very shallow groove. Epibranchial tooth small but prominent, sharp, with assessor spine at its base; anterolateral margin cristate, gently serrated; external orbital angle acutely triangular, sharp, outer margin almost straight, gently serrated, ca. 1.3 times length of inner margin. Supra- and infraorbital margins gently sinuous, weakly granulated. Frontal margin gently sinuous, gently deflexed downwards. Orbits broad, eyes well developed, filling most of orbit, corneal pigments distinct. Anterolateral, progastric, mesogastric, frontal and postorbital regions strongly granulose and rugose. Posterolateral margin gently convex, regions lined with oblique striae. Cervical groove shallow, reaches shallow H-shaped depression. Suborbital, sub-branchial and pterygostomial regions well demarcated by granulose ridges, surfaces rugose and granulose, glabrous. Anterior margin of epistome almost straight, parallel with frontal margin; posterior margin with median triangular tooth, lateral margins sinuous.

Exopod of third maxilliped not reaching upper edge of ischium, inner margin of distal part without trace of tooth or flagellum. Ischium with shallow, indistinct median groove; inner margin lined with stiff setae. Margins of merus cristate, medially depressed.

Chelipeds unequal, right larger. Outer surfaces of merus, carpus and palm covered with numerous small, rounded or squamate granules. Merus relatively long, without subterminal spine; with inner subdistal with sharp granule. Carpus with strong, sharp tooth on inner margin. Fingers longer than palm, tips hooked.

Ambulatory legs long, second leg longest. Merus without distinct subterminal spine, dorsal margin gently serrated. Outer surface of carpus and propodus with low median longitudinal ridge.

Surfaces of thoracic sternites 1-4 gently punctate; suture between sternites 2 and 3 not discernible. Sutures between sternites 3 and 4 very shallow, not clearly discernible except at edge. Abdominal cavity reaches to just before imaginary line joining clefts separating sternites 3 and 4. Sternal knobs on sternite 5, small. Abdomen triangular, telson subequal in length to sixth segment, lateral margins strongly concave, tip rounded; lateral margins of segments 3-5 gently convex; first segment reaches base of last pair of legs; second to sixth segments progressively broader and longer.

G1 relatively stout, gently sinuous, curving gently outwards. Inner margin and groove for G2 densely covered with long setae. G1 terminal segment clearly separated from subterminal segment, ca. 0.4 times length of subterminal segment, gently curving outwards, gradually tapering, dorsal margin with well developed fold, especially on proximal two-

thirds, distal part of subterminal segment distinctly narrow, neck-like. G2 ca. 1.1 times length of G1 subterminal segment, with well developed distal segment, ca. 0.62 times length of basal segment.

Female. - The female, a fully mature specimen, agrees with the holotype male in most non-sexual aspects. The epibranchial tooth of the female specimen however is simple, without an accessory spine or granule. The vulvae of the female is depressed, and the operculum is soft, recessed, and not clearly visible externally.

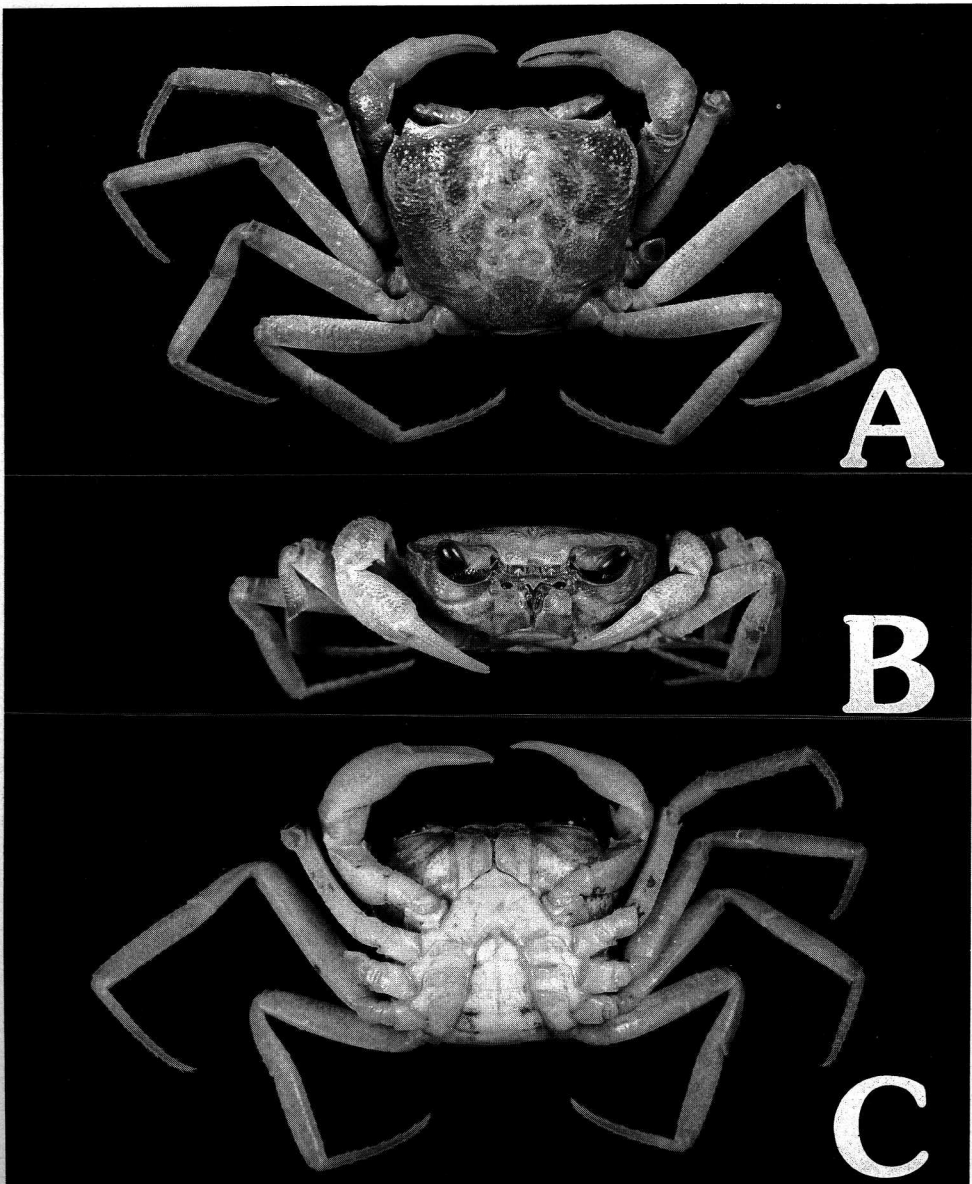


Fig. 1. *Nemoron nomas*, new species. Holotype male (23.7 by 20.3 mm) (ZRC 1996.94). A, dorsal view; B, frontal view; C, ventral view.

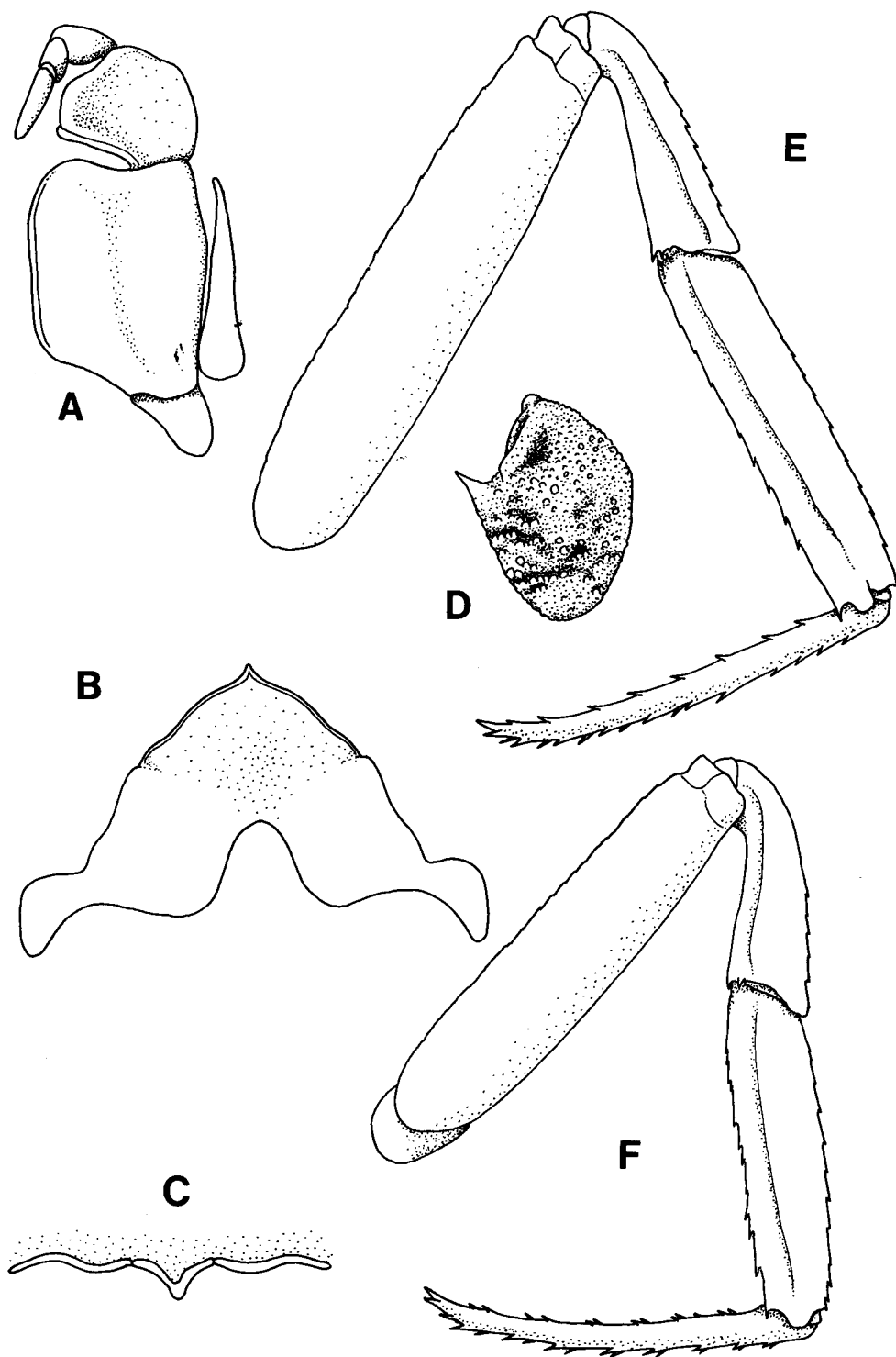


Fig. 2. *Nemuron nomas*, new species. Holotype male (23.7 by 20.3 mm) (ZRC 1996.94). A, left third maxilliped; B, anterior thoracic sternum; C, posterior margin of epistome; D, right canus of cheliped (dorsal view); E, right third ambulatory leg; F, right fourth ambulatory leg. Setae omitted.

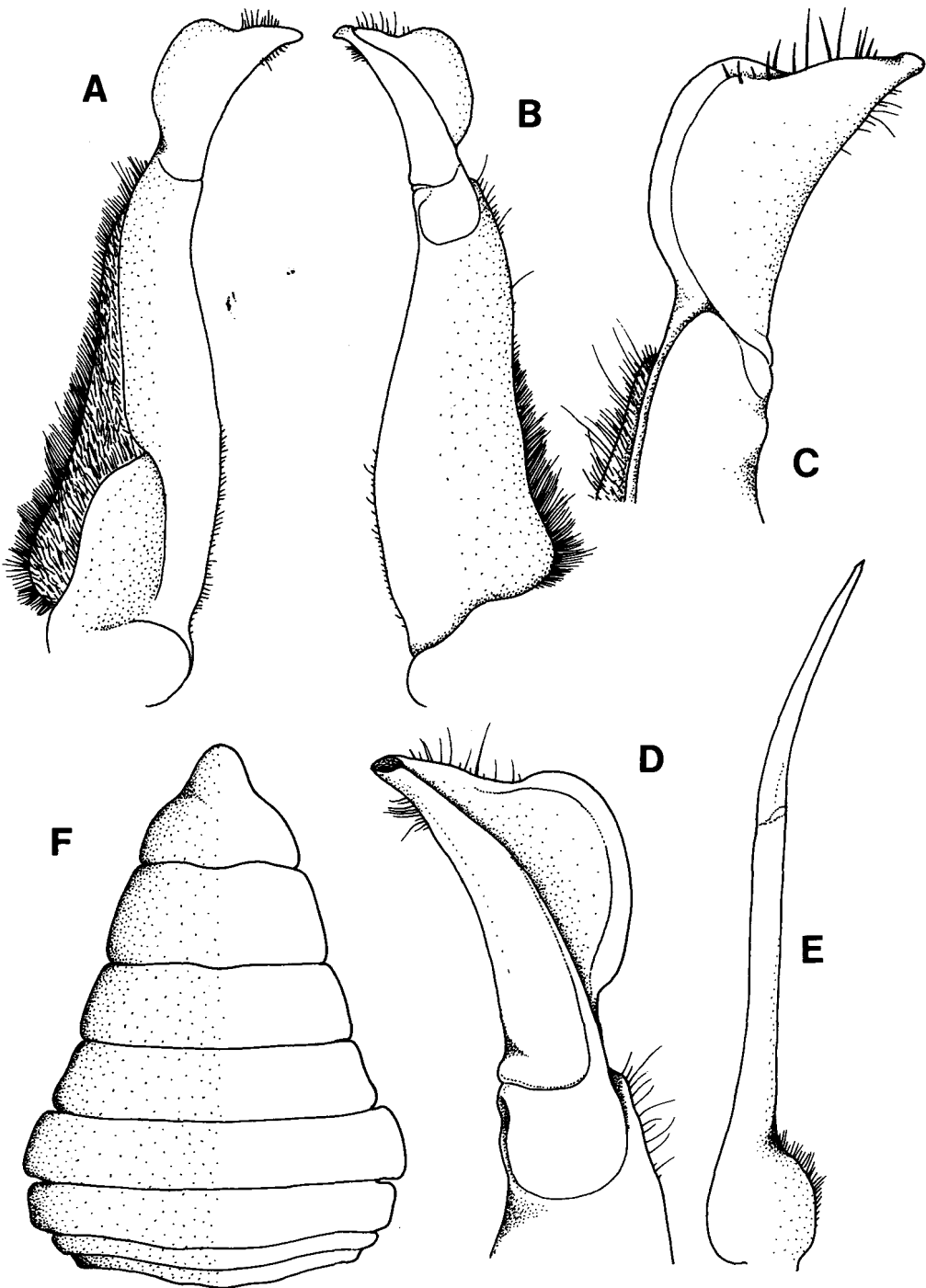


Fig. 3. *Nemoron nomas*, new species. Holotype male (23.7 by 20.3 mm) (ZRC 1996:94). A, abdomen (setae omitted); B, C, left G1; D, E, terminal segment of left G1; F, left G2. B, D, ventral view; C, E, dorsal view.

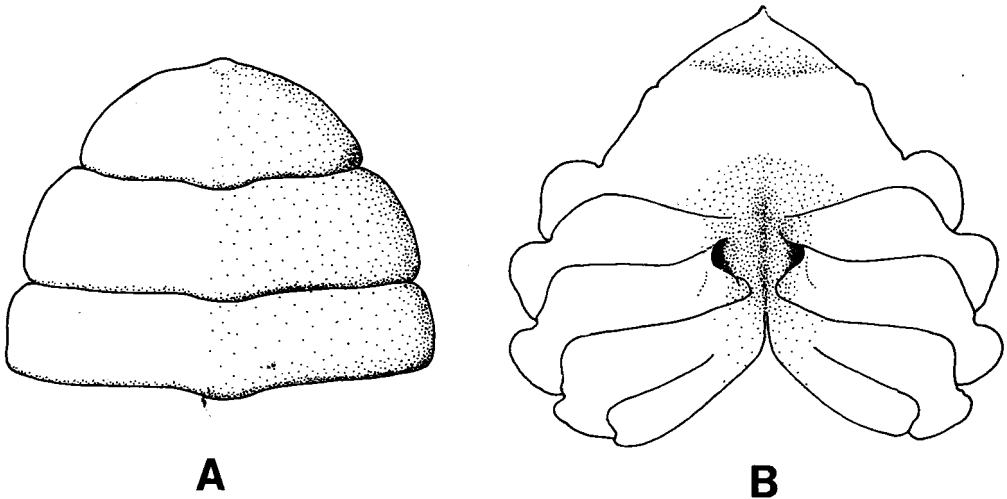


Fig. 4. *Nemoron nomas*, new species. Female (25.4 by 21.3 mm) (ZRC 1996.95). A, telson and anterior segments of abdomen; B, anterior part of sternum showing vulvae.

Etymology. - From the Greek “nomas” for wanderer and roam. Used as a noun in apposition.

Remarks. - The paratype female agrees with the holotype male well in all non-sexual aspects. Although the holotype male was collected about 300 m inside a cave, it seems unlikely it is a cavernicolous species, considering that it has almost no troglomorphic features, and that a female of the species was obtained in the open forest. The long ambulatory legs of the species is not a character unique to cavernicolous taxa, being present in many fast-moving terrestrial crabs as well (e.g. see Ng, 1991).

The holotype male was collected from inside a cave, but not far from the entrance. The paratype female was obtained on the forest floor. The species seems to be normally pigmented, with well developed eyes and fully pigmented cornea, and has no obvious adaptations for a cavernicolous lifestyle. The long ambulatory legs, although present in many species of troglobites, is also found in many terrestrial crab species not associated with caves (see earlier discussion under the genus).

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