

**TWO NEW APSEUDOIDEA LEACH, 1914 (CRUSTACEA,
TANAIDACEA) FROM THE NORTHERN MEDIO-LITTORAL
WATERS OF SRI LANKA**

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Dans une petite collection d'Apseudoidea de Sri Lanka, envoyée pour étude par le Dr. B. Sket de Ljubliana (Yougoslavie), on a identifié une sous-espèce nouvelle de *Pagurapseudopsis gymnophobia* et un *Apseudes* nouveau, l'*A. srilankaensis* sp. n. On propose aussi la création du genre *Brumia* gen. n., pour y inclure le *Pagurapseudopsis carinata* Brum, 1973; le genre est défini par le manque d'un exopodite au 2^e périopode et des lobes aux thoracomes, de même que par le présence d'une seule paire de pléopodes.

Dr. Boris Sket from the Institute of Biology-Ljubliana had the kindness to send me for study a vial containing a few Tanaids, collected by himself at Keerimalai, Yaffna Peninsula, on the north of Sri Lanka, from the area of a tidal spring, with variable salinity.

Although small, the collection proved to be interesting, including several specimens of a subspecies of an Indian Apseudid and a new species of *Apseudes*, both described below. I also found in this collection a specimen of *Leptognathia*, non-identified as species.

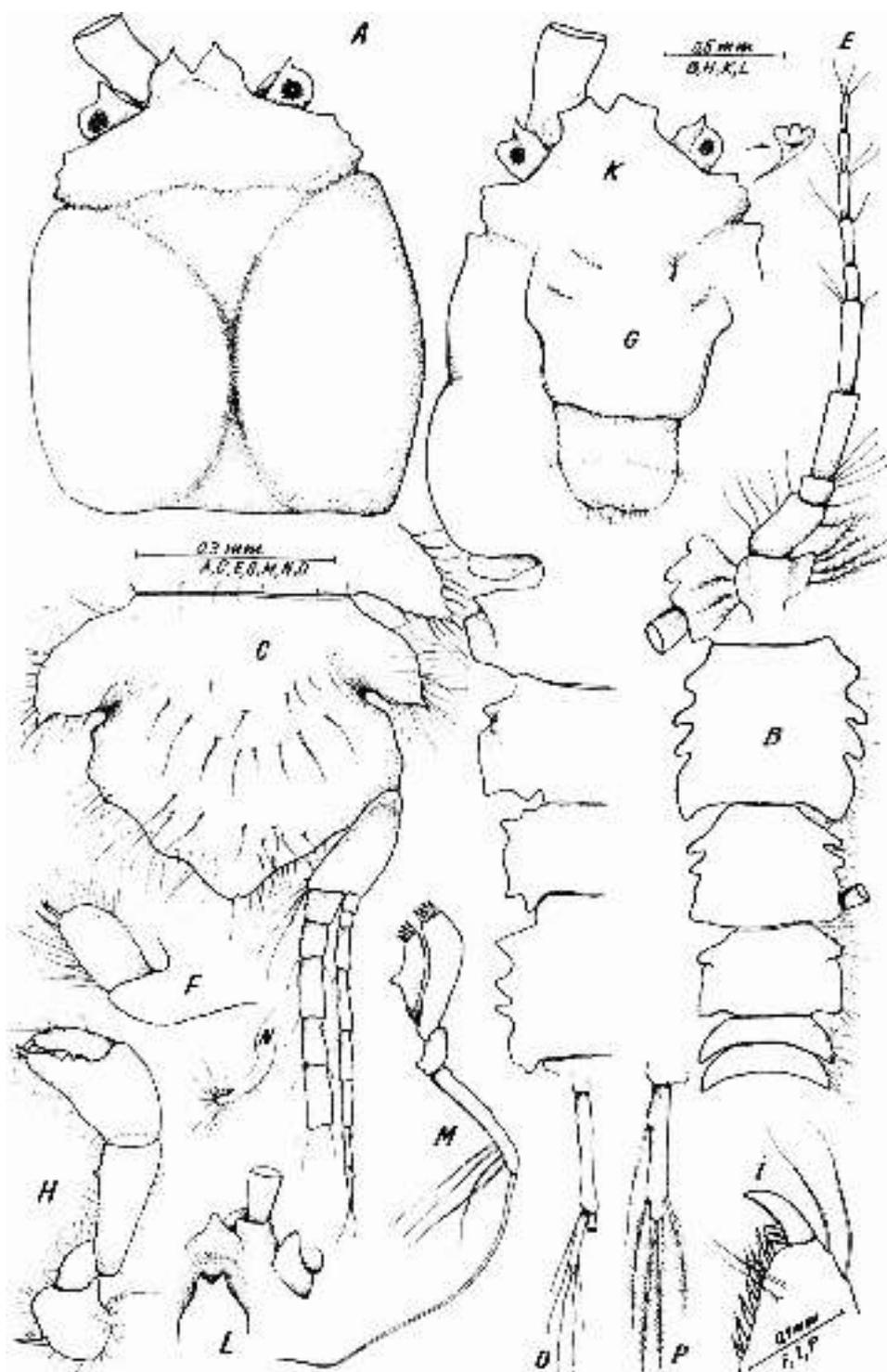
1. *Pagurapseudopsis gymnophobia ceylonica* ssp. n.

(Fig. 1 A—P and Fig. 2 R.S)

Diagnosis. Body excessively villous. Rostrum bilobate (lobes sharp in ♀, truncated in ♂) with ommatidia disposed in a brown rosette in the middle of the ocular lobes. Antenna with 10 segments. Peraeopod II like the other ones, but with exopodite similar to that of peraeopod I. Three chitinous denticles perpendicular on the claw of propod of cheliped, at its basis. A tiny epistomal tubercle in ♀ and an enormous bifid tubercle in ♂. Five pairs of fine tiny pleopods (♂ ♀) with equal rami and basis longer than them.

Description of female. Body flattened dorso-ventrally, extremely hairy, particularly on the sides of the body and on the appendages; tegument calcareous but not friable, yellowish. Cephalothorax with curved sides and two latero-inferior expansions posteriorly (fig. 1 A).

Rostrum shows 2 triangular lobes with pointed end. Ocular lobes large, with pointed end towards rostrum, and an intensely brown rosette



(especially in lateral view) in which one can distinguish a bunch of small omatidia (Fig. 1 K). Pereonites with lobated margins unlike in the nominate species (Fig. 1 B and K). The first 2 free thoracomeres as well as the last one have each a strong antero-lateral apophysis; the other ones with 3—4 tubercles on each side, as shown in the figure 1 K.

Pleotelson wider than long, with strong proximal lateral lobes, of the same shape, size and pilosity as the epimeres of pleonites; apex, when the para-anal lobes are closed (Fig. 1 C) seems to be triangular and slightly longer than the basis of uropods.

Sternal face does not show hyposphenia or tubercles.

Appendages

Antennula with 8-jointed small flagellum and 14-jointed long flagellum, whose joints are thicker; with 2 aesthetascs. Antenna with a strong basal article (showing an inner extension with 5 setae); 9 articles in total (Fig. 1 E).

Labrum slightly excavated (Fig. 1 G), with a tiny tubercle on the middle of the epistomal shield. Labium (Fig. 1 F) with 2 short external terminal spines, one of them bifid. Mandible with 3-jointed palp, the proximal joint swollen at the limit of the articulation with the following one. Maxillula shows a 2-jointed palp with 5 non-dented setae, the terminal one being exceptionally long (2.5 times longer than the small ones) (Fig. 1 M).

Maxilliped has nothing special, but the long plumose setae which double its usual phanerae; 2 retinacles. Endite of maxilliped crumpled ending in an apophysis hirsute on the round blunt end (Fig. 1 N).

Cheliped (Fig. 1 H) massive, but about 1/3 smaller than in ♂, with a small tubercle on carpus, a spine-seta on the curvature of basis and an exopodite with 2 plumose setae; long setae everywhere. The cutting edge of propodal finger with serrate setae and small tubercles; its claw shows 3 conical teeth at the basis. (Fig. 1 I). Dactyloclaw finer, sharp.

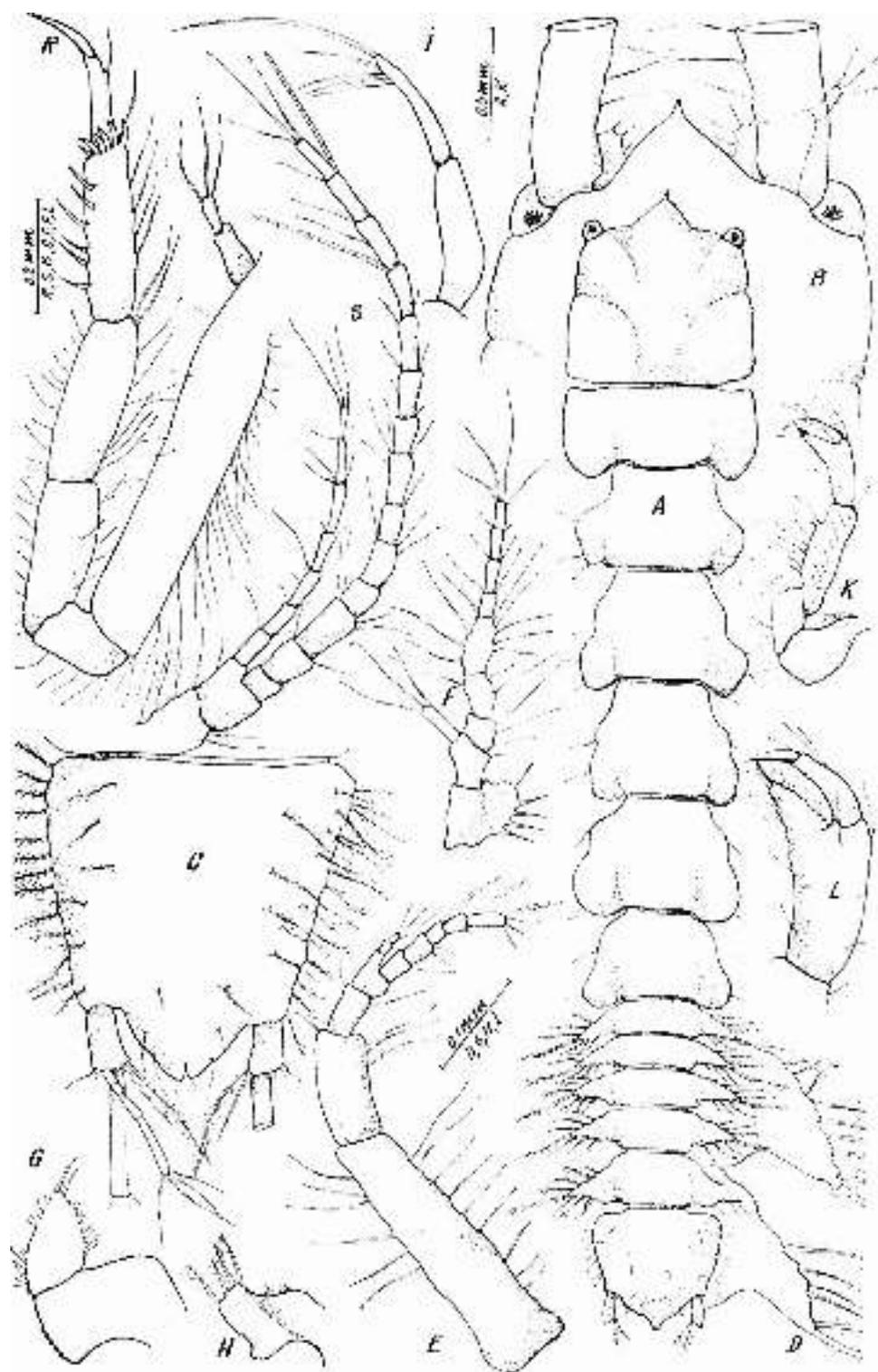
Peraeopod II does not differ from the other ones, as it is not of digging type. It is provided with an exopodite with 2 setae, a crown of curved spinules around dactylus, 5—6 fine spines on propod and fine long hairs everywhere. Basis cylindrical, without any apophysis.

The only ovigerous female has the marsupium full of embryos; other 3 ♀♀ had oval marsupial sheets and 2 are juveniles.

Five pairs of extremely fine pleopods (Fig. 1 O and P) closely stuck to pleonites and always directed rostrally.

Uropods show a short very hairy basis intero-distally, with 7-jointed exopodite and 16—17-jointed endopodite; the length of the endopodite is equivalent to the length of abdomen (Fig. 1 C).

Fig. 1. — *Pagurapseudopsis gymnophobia ceylonica* ssp. n. A—C and E—J = ♀: 5.8 mm. A, cephalothorax; B, thoracomeres IV—VI; C, pleotelson; E, antenna; F, lobe of labium; G, labrum; H, cheliped; I, fixed finger of chela; Fig. K—P = ♂. K, frontal side of carapace (arrow = eye, lateral view) and lateral side of first pereonites, tergal view; L, epistome and anterior side of carapace, sternal view; M, maxillula; N, tip of endite of maxilliped; O, pleopod IV; P, end of its exopodite, magnified.



Size: 5.5—6.2 mm.

Description of male. Slightly larger than the female (6.3 mm). It impresses by the robustness of chelipeds 1/3 thicker than those of ♀ and the strong epistomal prominence (Fig. 1 L) ending in two round tubercles directed rostrally. In front of them, a curved clypeus with sharp tip reaching the level of rostral excavation. It is about them that Barnard (1935) writes: "Epistome in ♂ with 2 projections, the upper one projecting slightly upwards" (p. 318, Fig. 21 g). Massive prominences on the anterior side of the first 3 thoracic sternites, but not proper hyposphenia. No genital tubercle is observed. The bifid rostrum shows straight truncated lobes, non pointed.

Antenna differs from *P. gymnophobia typica* in the smaller number of joints (10 instead of 15) and in their different succession.

Holotype ♂ under no. 671, allotype — ovigerous ♀ — under no. 672 and 3 paratypes — preadult ♀♀ — under no. 672 bis in the Crustacean collection of the "Grigore Antipa" Natural History Museum. 2 ♀♀ paratypes in the collection of Dr. Sket.

Biocœnosis: the species was captured together with a new *Apsuedes*, *A. srilankaensis* and a non-identified species of *Leptognathia*.

Remarks. Three species belonging to genus *Pagurapseudopsis* Shiino, 1963: *P. gracilipes* Shiino of the Viet-Nameese waters, *P. iranica* Băcescu, 1979 of Ormuz Strait and Aden Gulf, as well as *P. gymnophobia* (Barnard, 1935), of the Indian waters — are known so far. A fourth mentioned species, *P. carinata* Brum, 1973 does not belong to this genus, as it shows no exopodite on pereopod II, non-lobated thoracomeres, a single pair of pleopods etc. It certainly belongs to a new genus, *Brumia*, whose diagnosis is given in the generotype description of *B. carinata* (Brum, 1973).

The new subspecies which is being described differs from the type of the Indian species, *P. gymnophobia*, in the dimorphic structure of rostrum, another structure of the sides of thoracomeres in ♂, of chelipeds and of antenna. As Barnard describes only the ♂ and he speaks clearly neither about the epistomal expansions nor about the teeth at the basis of dactylo-claw of propod, this could be a good species in the case of Sri-Lanka. This could not be certain until a more detailed comparative study and an ampler figure of *A. gymnophobia*, especially of the female, are made.

It differs from *P. iranica* in the presence of 5 pairs of pleopods, like in *gymnophobia*, in the presence of a bifid tubercle on the epistomal shield, as well as in the presence of 3 denticules at the basis of claw of palma of chela.

It differs from *P. gracilipes* Shiino, 1963 in the different shape of the optic lobes, in the excavation of the first free thoracomere antero-laterally and particularly in the lack of the strong apophysis on the basipodite of pereopod II and the tubercles on that of pereopod III.

Fig. 2. — *Pagurapseudopsis gymnophobia ceylonica* (follow): S, antenna; R, pereopod II and *Apsuedes srilankaensis* n. sp.; A and D, ovigerous ♀ = 5 mm; the rest — ad. ♀ = 4,2 mm: A, tergal view; B, anterior side of cephalothorax of ♀ = 4,2 mm; C, pleotelson of the same ♀; D, abdominal epimeres II—III, magnified; E, antennula; F, antenna; G, 1/2 of labium; H, endite of maxillula; I, its palp; K, pereopod I; L, its chela.

***Apsuedes srilankaensis* sp. n.**

(Fig. 2 A—H, K, L and Fig. 3 J, M—P)

Diagnosis. Small size (4,2—5 mm), with a wide triangular rostrum, ending in a minute spine. Tegument soft, glabrous on thorax, strongly villous on abdomen. Antennula with only 2 + 5 — jointed flagelli; antenna with 2—3 setae on scale and a strong enlargement of its first basal article; this extension, armed with 5 spines, is clearly visible between rostrum and A, in tergal view. Eyes more spherical than conical, with pigment and ommatidia. Five pairs of pleopods with large foliaceous rami. Chelipeds smaller than peraeopods II, both with exopodites.

Uropods with short basis, each with a strong hairy seta on the interterminal corner.

Description of female. Tegument soft, slightly calcified, ivory. Body elegant, 7 times longer than the maximum width attained by the first free segment. Thoracic segments (Fig. 2 A) with sinuous sides, practically glabrous, except 2—3 fine hairs; coxal plates are not seen even on the basis of peraeopod II.

Abdomen, slightly wider than thorax, is in exchange villous, with many plumose long setae, especially on the sharp and ventrally curved epimeres (Fig. 2 A) and on pleotelson which is longer than wide, trapezoidal (Fig. 2 C), extremely hairy, with long plumose setae on the dorsal side too. Hyposphenia absent. Cephalothorax almost rectangular, with slight depressions in front of the respiratory chambers, with an obtuse triangular rostrum ending in a short spiniform tip (Fig. 2 B); ocular lobes globulous (in tergal view, they appear curved) with less developed ommatidia on a brown pigmentary mass.

Appendages. Antennula (Fig. 2 E) with a long basal article and only 2-jointed small flagellum (the same in the 1.5 mm juvenile) and 5-jointed big flagellum with 3 aesthetascs.

Antenna (Fig. 2 F) with strong proximal basal article strongly widened innerly, with margin in semicircle armed with 5 special spines-setae; this expansion, a real coxal plate, clearly appears near the bases of antennae, in tergal view. For the rest, a scale with only 3 setae and 7 articles with long simple setae.

An epistomal spine lacks; labrum curved. Labium (Fig. 2 G) with deep splint, with dented lateral edge; palp with short hairs interrupted by longer fine setae and 2 terminal simple spines. Mandible common, with 3-jointed palp provided with lots of hairs. Maxillula with edite with 4-fid phanerae (Fig. 2 H) and a biarticulate palp with 4 short setae and a long one (Fig. 2 I) non dented.

Maxilliped, with common structure, shows 3 retinacles and a bunch of 6 long setae on the external corner of basis (Fig. 3 J); on symmetrical appendage there are 4 retinacles; its epipodite ends in a sharp not-hairy tip.

Cheliped (Fig. 2 K) fine, with a long chela and sharp claws (Fig. 2 L). Carpus with 2 series of hairs and a small inner tubercle, without spines.

Paraeopod II (Fig. 3 M) is characterized by the excentric articulation of propodus on carpus, which is much prolonged externally. Thick setae between

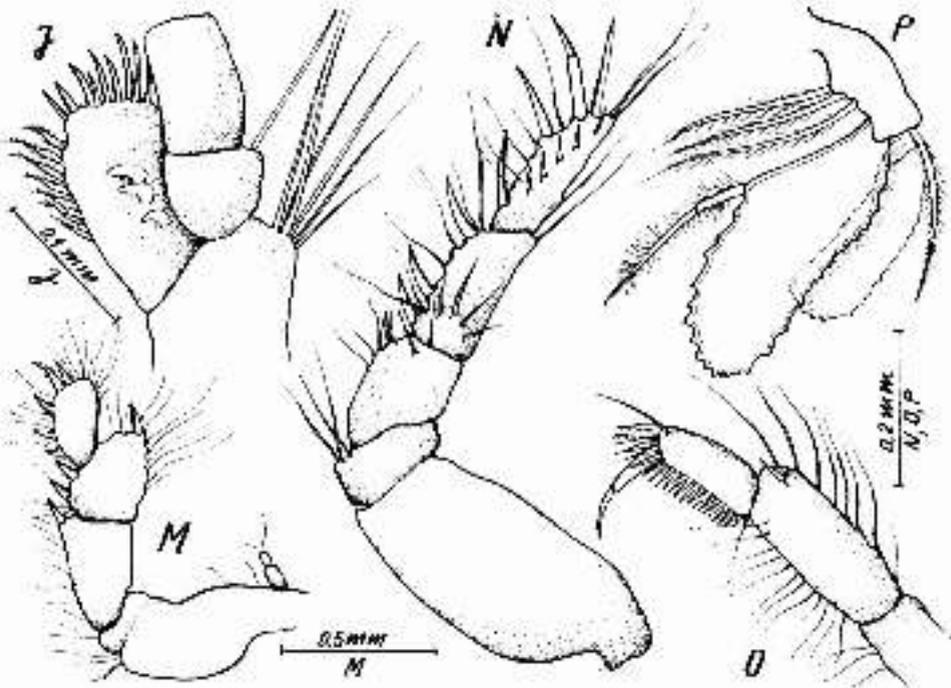


Fig. 3. — *Aapseudes srilankaensis* (follow) J, proximal side of maxilliped; M, pereopod II; N, pereopod V; O, terminal side of pereopod VII; P, pleopod V.

the strong spines; all the articles \pm lamellar. Exopodite a bit longer than that of cheliped, but also with 3 setae. The rest of pereopods show, in general, strongly widened bases; propodus and carpus with strong spines alternating with long setae. (Fig. 3 N). Last pereopod (Fig. 2 D) provided with a comb of phanerae double serrated all along propodus which ends in 4–5 sicklelike paradactylar claws.

5 pairs of pleopods with 3 strong plumose setae on the basis and 2 foliaceous rami (Fig. 3 P). Uropods with a short basis inserted laterally, not exceeding the triangular tip of pleotelson. Very characteristic for this basis is a long hairy seta (Fig. 2 C) starting from its inner terminal corner, crossing with the symmetric one over the tip of pleotelson (they probably serve for cleaning); on the outer side, the basis shows only 2 small hairs; exopodite 3-jointed and endopodite 14–15-jointed.

Young specimens of 1.5 mm show coloured eyes; rostrum is largely oval, not triangular and practically without any tip. A_1 with 2 + 4 joints at flagellum; uropods with 2- and 4-jointed rami.

Size: 4.2–5 mm (f); m unknown.

Material: 1 ovigerous f (= 5 mm), 1 f with marsupial sheets (= 4.2 mm) and 6 juv. = 1.5–1.8 mm.

Holotype: f with marsupium, under no. 670, coll. of crustaceans in "Grigore Antipa" Natural History Museum.

Remarks

A. srilankaensis was captured in the intertidal area with fresh water resurgences together with *Pagurapseudopsis gymnophobia ceylonica* and *Leptognathia* sp.

It is one of the rare species of the genus showing only 2 + 5 joints in antennula (♂ ♀); e.g. *A. littoralis* Shiino and *A. latus*. It differs from the first in the fineness of cheliped devoid of carpal tubercles.

From *A. latus* Chilton from New Zealand, it differs in the lack of the strong tooth on dactylus of chela, in the shape of the first basal article of antennula (4 times longer than wide, not twice, like in *A. latus*), as well as in another structure of peraeopod II, another armature of the basis of uropod and in a rich villosity of pleotelson.

This is the first contribution to the knowledge of the Tanaid fauna of Sri Lanka and I would like to take this opportunity to express my sincere thanks to Dr. B. Sket for having supplied me with this material for study.

**DOUĂ NOI APSEUDOIDEA LEACH, 1914 (CRUSTACEA, TANAIIDACEA)
GĂSITE ÎN APELE MEDIO-LITORALE LA NORD DE SRI LANKA.**

REZUMAT

Într-un material colectat de Dr. B. Sket din Jugoslavia am identificat o subspecie nouă a speciei indiene, *Pagurapseudopsis gymnophobia*, *P.g. ceylonica* ssp.n. precum și o specie nouă, *Apseudes srilankaensis* sp.n. La prima se descrie și masculul și femela, la a doua, numai femela. Acestea sînt primele citări de Tanaide din apele Sri Lanka. Se propune și un nou gen, *Brumia* gen.n., pentru a include specia *carinata* Brum, 1973, plasată de acel autor în genul *Pagurapseudopsis*.

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