

A new mud lobster of the genus *Thalassina* Latreille, 1806 (Crustacea: Decapoda: Gebiidea: Thalassinidae) from marine seagrass beds in Dongsha (Pratas) Island, South China Sea

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Abstract. A new species of the mud lobster genus *Thalassina* Latreille, 1806, is described and illustrated on the basis of a single female specimen from Dongsha (Pratas) Island, South China Sea. *Thalassina pratas*, new species, appears closest to *T. spinosa* Ngoc-Ho & de Saint Laurent, 2009, but its less spiny carapace immediately distinguishes the new species from *T. spinosa*. *Thalassina anomala* (Herbst, 1804) is also substantially similar to the new species, but the presence of spines on the cervical ridge on the carapace immediately separates the new species. The holotype of the new species was collected from subtidal seagrass beds in a fully marine lagoon, an unusual habitat for *Thalassina*, of which other species are seen in estuarine habitats or mangroves.

Key words. Gebiidea, *Thalassina*, new species, Dongsha, Pratas Island, seagrass beds

INTRODUCTION

The gebiidean mud shrimp genus *Thalassina* Latreille, 1806 (Thalassinidae) had long been believed to include only one or two species, *T. anomala* (Herbst, 1804) and *T. squamifera* De Man, 1915, with several other nominal taxa considered as junior synonyms of *T. anomala* (see Holthuis, 1991). However, a recent revision by Ngoc-Ho & de Saint Laurent (2009) recognised seven species in the Indo-West Pacific region, viz., *T. anomala*, *T. gracilis* Dana, 1852; *T. emerii* Bell, 1844; *T. krempfi* Ngoc-Ho & de Saint Laurent, 2009; *T. spinirostris* Ngoc-Ho & de Saint Laurent, 2009; *T. spinosa* Ngoc-Ho & de Saint Laurent, 2009; and *T. squamifera*. The specific identity of *T. gracilis* was fixed through a neotype selection from the topotypic material in Singapore. In the same year, Moh & Chong (2009) described one more new species, *T. kelanang*, from Malaysia. Shortly thereafter, Sakai & Türkay (2012) reviewed the genus and erected two more new species, *T. australiensis* and *T. saetichelis*. Moh et al. (2013) used three genes (mitochondrial COI and nuclear PEPCK and NaK) to verify the taxonomic status and study the relationships of *T. anomala*, *T. gracilis*, *T. kelanang* and *T. squamifera*. This paper describes a new species, discusses recent comments on the taxonomy of *Thalassina*

(Sakai & Türkay, 2012) and provides a revised key to the 10 extant species.

Species of *Thalassina* are generally known to burrow deeply at the edges of estuaries near the high tide mark to sublittoral zone or in mangrove forests (Ng & Kang, 1988; Ngoc-Ho & de Saint Laurent, 2009). The new species, however, was collected from fully marine subtidal seagrass beds (*Thalassia hemprichii* (Ehrenberg) Ascherson, 1871) in the lagoon of Dongsha (Pratas) Island in the South China Sea, a habitat previously unreported in the genus (Fig. 1A).

MATERIAL AND METHODS

Mouthparts were not dissected since only one specimen (holotype) is available and they appear to be of little taxonomic value. Carapace length (cl) is measured dorsally from the orbital margin to the posterior margin of the carapace. The holotype is deposited in the collection of the National Museum of Natural Science, Taichung, Taiwan, R.O.C. (NMNS).

TAXONOMIC ACCOUNT

Family Thalassinidae Latreille, 1831

Genus *Thalassina* Latreille, 1806

Type species. *Thalassina scorpionides* Latreille, 1806, a junior synonym of *Cancer (Astacus) anomalus* Herbst, 1804, by monotypy.

Remarks. The taxonomic history of *Thalassina* was summarised by Ngoc-Ho & de Saint Laurent (2009). Close similarities among species have brought confusion in their identification in the early literature. Nevertheless, the

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identities of most of the currently recognised species were well established morphologically by the revision of Ngoc-Ho & de Saint Laurent (2009), supplemented by the molecular analysis of Moh et al. (2013). In the interest of nomenclatural stability, a neotype was selected for *T. gracilis* by Ngoc-Ho & de Saint Laurent (2009), of which the original type material is no longer extant. Sakai & Türkay (2012) presented a strange argument criticising the neotype selection by Ngoc-Ho & de Saint Laurent (2009), claiming that the neotype does ‘not coincide with the original description and figures of the specimens by Dana in 1852’. However, the argument put forward by Sakai & Türkay (2012) is futile because the neotype selection of Ngoc-Ho & de Saint Laurent (2009) fulfills ICZN (1999) Article 75.3 and is valid.

On the other hand, as discussed by Sakai & Türkay (2012) the exact identity of the Miocene fossil taxon *T. emerii* is indeed difficult to establish due to its very incomplete holotype hindering proper assessment of its diagnostic characters. Sakai & Türkay (2012) argued that the recent specimens referred to *T. emerii* by Ngoc-Ho & de Saint Laurent (2009) contain two species, both were attributed to new species, *T. australiensis* and *T. saetichelis*. The present work follows Poore (2015) in regarding these two species as valid and *T. emerii* as a fossil species possibly distinct from any of the extant species though its exact identity is uncertain.

***Thalassina pratas*, new species**

(Figs. 1–4)

Material examined. Holotype: female (cl 44.4 mm) (NMNS 6772-012), fully marine seagrass beds, 1–2 m, Dongsha (Pratas) Island, South China Sea, 15 October 2011.

Diagnosis. Rostrum with blunt tip; lateral margins each with tubercles; median groove not reaching posterior ends of rostral lateral carinae. Carapace with nearly smooth anterolateral carinae; posterodorsal median process long; cervical groove bordered with spines only laterally; postcervical carapace only with a few spines limited to area adjacent to linea thalassinica. Marginal tubercles on pleura of pleomeres 3–5 blunt. Sternites of pleomeres 2 and 3 each with 1 median tubercle anteriorly, those of pleomeres 4 and 5 each with 2 median tubercles; no other tubercles. Antennal scaphocerite small, but well developed. Pereopod 1 palm with dorsolateral carina extending along entire length of palm, with 23–25 conspicuous tubercles, dorsomesial carina with 12 much larger, laterally compressed, tooth-like tubercles; few granules on intercarinal space between dorsolateral and dorsomesial carinae. Pereopod 3 merus with row of conspicuous spines on dorsal margin over entire length; dactylus with corneous tubercles on dorsal margin.

Description. Rostrum (Figs. 2A, 3A) short, reaching slightly beyond distal margin of first segment of antennular peduncle, rather thick dorsoventrally; tip blunt; dorsal surface medially slightly depressed; lateral margins with 3 (right) or 5 (left) tubercles; lateral rostral carinae diverging posteriorly, reaching to anterior 0.2 of distance between base of rostrum and cervical groove, with 2 (left) or 3 (right) obsolescent

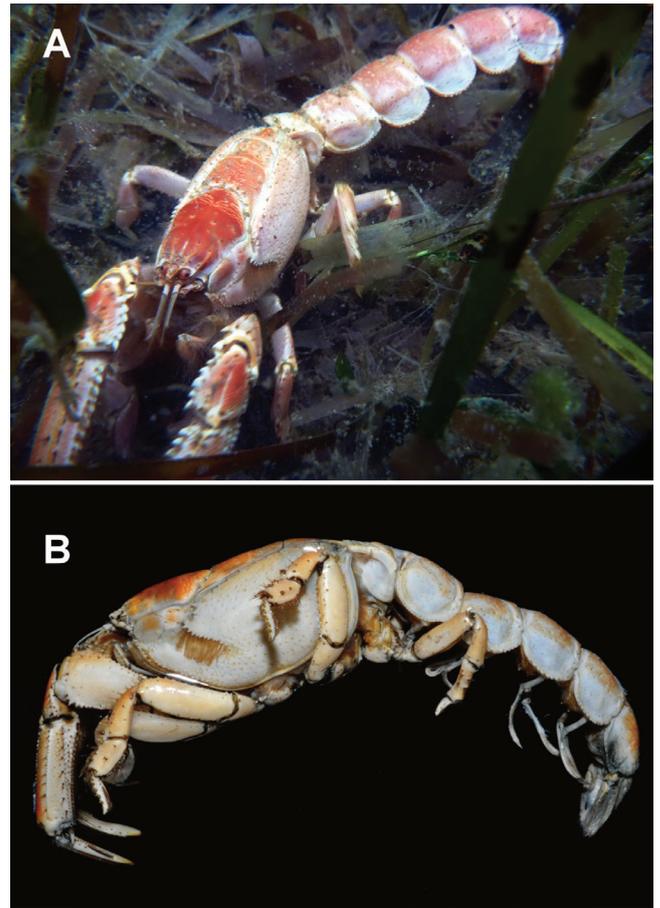


Fig. 1. *Thalassina pratas*, new species, holotype, female (cl 44.4 mm), NMNS 6772-012. A, live animal in habitat when collected; B, habitus, lateral view.

tubercles anteriorly; median groove shallow, not reaching posterior end of lateral rostral carinae.

Carapace (Figs. 1B, 2A, B) elongate oval in dorsal aspect; linea thalassinica running over entire length of carapace, converging to posterodorsal median process posterior to cervical groove; gastric region anterior to cervical groove convex transversely, with widely separated tufts of short setae in 2 rows on either side of midline; anterolateral carinae slightly diverging posteriorly in anterior part and then slightly incurved, reaching to anterior 0.3 of distance between rostral base and cervical groove, each with 5 faint tubercles; ocular spine acuminate, directed forward in lateral aspect, slightly directed inward in dorsal aspect; antennal spine small, subacute, slightly directed laterally in dorsal aspect; cervical groove bordered posteriorly by 3 tubercles on left and 5 tubercles on right, these tubercles becoming stronger and sharper laterally; postcervical dorsum divided in 3 parts by transverse uncalcified sutures, first part with paired tiny tubercles in posterior two-thirds, second part with slightly rugose surface, and third part tapering posteriorly into long posterodorsal median process overhanging anterior section of pleomere 1 (Fig. 3B). Branchiostegite broad, dorsally with deep groove extending from level of lateral end of cervical groove to posterior end of first part of postcervical dorsum along linea thalassinica and bordered by spines or tubercles, and with short transverse suture extending near lateral end

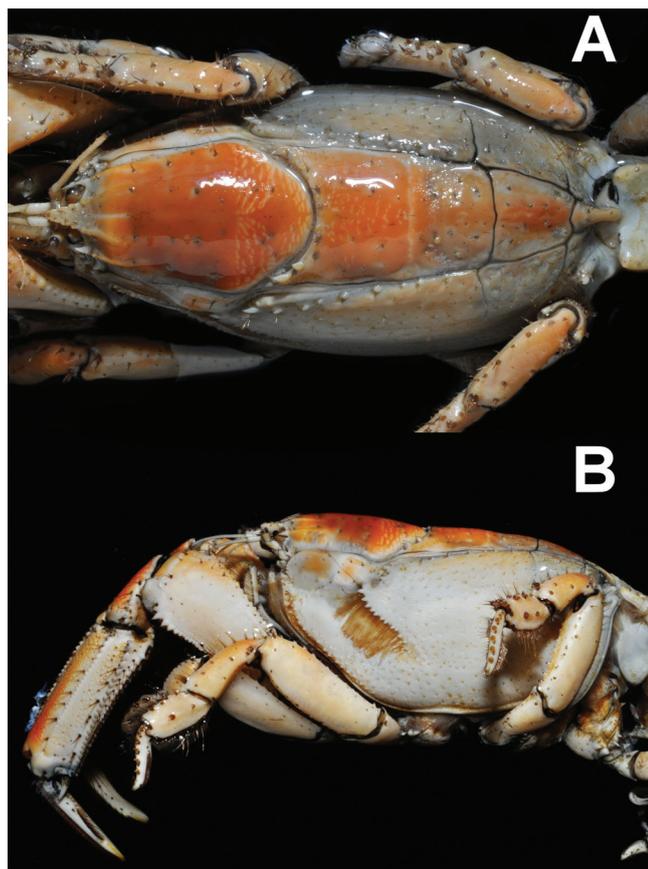


Fig. 2. *Thalassina pratas*, new species, holotype, female (cl 44.4 mm), NMNS 6772-012. A, cephalothorax dorsal view; B, same, lateral view.

of postcervical suture on dorsum; anterolateral margin with 1 conspicuous spine and minute to tiny tubercles; lateral surface ornamented with numerous striae, with scattered small tubercles anteroventrally and scattered minute pits over entire surface, oblique hepatic carina bearing 13 (right) or 14 (left) spines or spiniform tubercles and row of long stiff setae; anterior part with shallow sulcus extending to base of marginal spine, bordered ventrally by irregular row of tiny tubercles; strong, forwardly curved spine slightly anterolateral to base of posterodorsal median process.

Pleon (Figs. 1B, 3C) moderately slender. Pleomere 1 smallest, trapezoidal in dorsal aspect, 1.2 times as wide as long; dorsal surface with tufts of short stiff setae arranged in pairs, and also with deep depression on anterior two-thirds, anterolateral angles slightly produced, bearing tiny tubercle, posterior part with distinct obliquely transverse grooves on either side of midline; pleuron roundly triangular in general outline, lateral surface depressed, with thick keel overhanging dorsal to posterodorsal parts, ventral side continuous to sternite. Pleomere 2 with tergum also trapezoidal, widened posteriorly in dorsal aspect; tergal surface with scattered setose pits, anterior part with shallow sulcus along anterior margin extending to pleuron, posterior part also with shallow obliquely transverse sulci on either side of midline adjacent to posterodorsal margin, extending also to pleural surface; pleuron with minute pits dorsally, bearing sinuous row of small rounded tubercles dorsally defining boundary

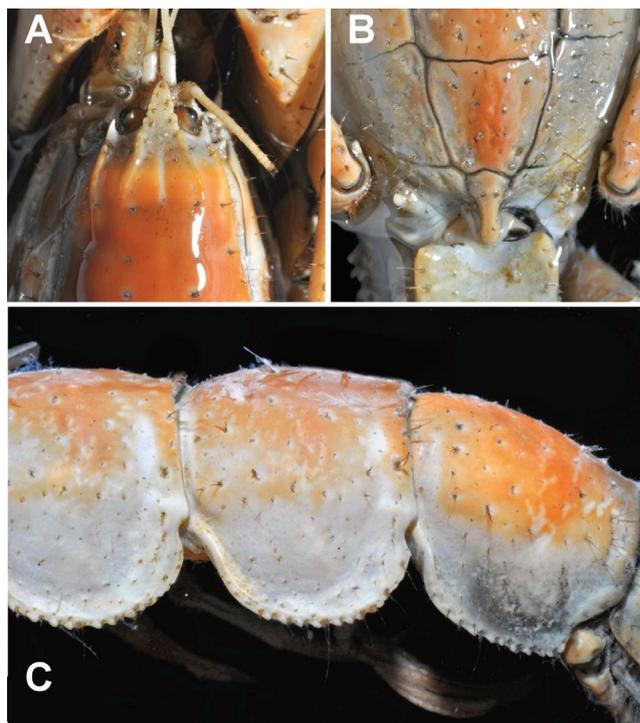


Fig. 3. *Thalassina pratas*, new species, holotype, female (cl 44.4 mm), NMNS 6772-012. A, frontal part of carapace and cephalic appendages, dorsal view; B, posterodorsal margin of carapace, dorsal view; C, pleomeres 4–6, lateral view.

between tergum and pleuron, submarginal carina along ventral margin sharply delimited, pleural margin bordered with row of rounded or spiniform tubercles; sternite with 1 tiny median tubercle anteriorly. Pleomere 3 about 1.3 times as long as wide; tergal surface with scattered minute setal pits or punctate, with shallow sulcus extending onto pleural surface adjacent to posterior margin, anterolateral part slightly inflated; pleuron slightly flared laterally, generally rounded ventral margin bordered with small blunt tubercles; shallow notch present on posterior pleural margin; sternite with 1 median tubercle, otherwise unarmed (Fig. 4G). Pleomere 4 similar to pleomere 3 in shape and ornamentation; sternite with 2 median tubercles, otherwise unarmed (Fig. 4G). Pleomere 5 generally similar to pleomeres 3 and 4, but posterior sulcus hardly discernible; sternite with 2 median tubercles, otherwise unarmed. Pleomere 6 generally similar to preceding pleomeres, but slightly narrower; posterolateral angle weakly angular; ventral margin bordered with spiniform tubercles in posterior two-third; sternite with transverse groove adjacent to posterior margin, unarmed. Telson subtriangular, 1.3 times as long as wide; dorsal surface strongly convex transversely, with minute setal pits or punctate arranged in pair; posterolateral angles slightly defined, posterior margin rounded, with tiny median tubercle on ventral side of apex.

Eyestalk (Fig. 3A) very short, strongly widened basally, bearing tiny spiniform tubercle on ventromesial face; corneal small, terminal, semispherical, darkly pigmented.

Antennular peduncle (Figs. 2A, 3A) short; article 1 fused basally; article 2 slightly widened distally; article 3 about

1.3 times as long as and distinctly slender than article 2. Flagella subequal in lengths; outer flagellum slightly stouter than inner flagellum, articles all wider than long.

Antennal peduncle (Fig. 4A) reaching midlength of article 3 of antennular peduncle. Article 1 with small tubercle distolaterally, distomesial part produced into rounded process with green gland opening terminally. Article 2 with 2 tubercles on distolateral margin. Scaphocerite small, subconical with blunt apex. Small subconical structure seen articulated at distolateral margin of article 2 (similar to supernumerary segmentation observed in Paguroidea). Article 3–5 all short, stout, unarmed. Antennal flagellum partially damaged.

Maxilliped 3 moderately slender. Ischium with distinct longitudinal carina on ventral surface accompanied with sulcus; crista dentate consisting of row of corneous tipped teeth of various sizes. All articles setose, with setae on lateral sides particularly long. Exopod well developed, slightly overreaching distal margin of endopodal ischium; flagellum divided into 2 articles.

Pereopods 1 (Figs. 2B, 4B, C) subchelate, almost similar, left slightly longer than right. Coxa with minutely denticulate distal margin. Basis short, ventrolaterally with narrow setal field flanked by minutely tuberculate outer ridge and inner row of small spiniform tubercles. Ischium strongly widened distally, with row of 6 spiniform tubercles on dorsal margin; ventral surface with narrow setal field flanked by outer row of small tubercles and inner row of strong spines increasing in size distally. Merus widened distally; dorsal margin carinate, with row of spines or spiniform tubercles increasing in size distally, distalmost spine strong, subterminal; lateral surface slightly convex, with setal pits or punctate adjacent to dorsal and distal margins; ventral surface tricarinate, outer carina bordered with row of tubercles that becoming larger and sharper distally, medial carina formed by row of strong spines, inner carina minutely crenulate, space between outer and medial carinae with row of long setae on medial side and some tubercles in distal part; mesial face slightly concave, with sparse setal pits or punctate. Carpus with row of 6 spines or spiniform tubercles increasing in size distally (1 minute tubercle interspersed by main spines present on left side); lateral surface convex, almost smooth except for minute granules on distoventral part, with shallow median sulcus, longitudinal row of small tubercles dorsal to median sulcus, and row of spiniform tubercles adjacent to ventral surface; distolateral margin faintly denticulate; mesial surface with minute granules centrally, distomesial margin minutely denticulate. Propodal palm elongate oblong, fairly compressed laterally; dorsal surface bicarinate, dorsolateral carina extending over entire length of palm, with 23 (left) or 25 (right) blunt, forwardly directed small tubercles, dorsomesial carina with 12 much larger, laterally compressed, tooth-like tubercles each with blunt apex, space between two carinae with few granules proximally and row of tufts of stiff setae just mesial to carinae (mesial setae longer than lateral setae), but otherwise nearly smooth; convex lateral surface divided in two parts by weak median carina composed of

row of small rounded tubercles increasing slightly in size proximally, both parts covering with minute granules except for smooth distal one-fifth; ventral surface bicarinate, lateral carina with row of small tubercles directed laterally and increasing slightly in size proximally, mesial carina bearing row of smaller tubercles with subacute apices, space between two carina widened proximally, with row of spiniform tubercles in proximal half; mesial surface weakly convex, entirely covering with numerous granules and bearing row of similar granules adjacent to dorsomesial carina; dorsodistal margin faintly granulate. Fixed finger short, less than 0.2 times as long as dactylus, directed forward, terminating in corneous acute tip, opposable margin with row of closely appressed corneous or corneous-tipped spinules. Dactylus tapering, 0.9 times as long as palm, dactylus-palm articulation with 45 degree of rotation; outer surface divided in two parts by blunt longitudinal ridge accompanied by narrow longitudinal field of dense stiff setae, upper part almost naked except for short longitudinal row of setal punctate, lower part also almost naked; opposable margin with distinct proximal concavity and strongly denticulate convexity distal to proximal concavity, further away with narrow setal field reaching to distal one-third of dactylus length; upper surface bicarinate with very narrow field of dense long stiff setae, outer carina smooth, inner carina bordered with tubercles that becoming corneous distally; inner surface glabrous except for few setal punctate or tufts; distal part bordered by corneous plate.

Pereopod 2 (Fig. 4D) subchelate. Coxa fairly inflated posteroventrally, with 1 minute granule at ventromesial distal angle. Basis incompletely fused with ischium; ventral margin with 3 minute spiniform tubercles. Ischium widened distally; ventral margin slightly sinuous, with row of small tubercles, ventrodiscal angle ending in small tubercle. Merus with row of small spines or tubercles decreasing in size proximally, distalmost spine terminal, curved; lateral surface with 2 rows of setal punctate dorsally; ventral margin gently convex, with narrow fields of long stiff setae. Carpus widened distally, cup-like; lateral surface convex, with row of setal punctate adjacent to dorsal row of long stiff setae; ventral surface with 2 rows of stiff setae. Propodus strongly compressed laterally, suboval in general outline, dorsal and ventral margins with numerous long stiff setae; ventrodiscal angle produced in small triangular tooth forming fixed finger, terminating in blunt tip, opposable margin weakly denticulate with minute blunt corneous teeth. Dactylus subequal in length to propodus, strongly compressed, lance-shaped with bluntly pointed apex; dorsal margin with 2 contiguous rows of long stiff setae; lateral surface with narrow median setal field extending almost over entire length; ventral margin slightly convex, bordered by minute, distally truncate, corneous or corneous-tipped teeth becoming fused distally; mesial surface almost glabrous, but with tuft of short stiff setae filling small concavity at proximoventral part.

Pereopod 3 (Fig. 4E) coxa with 4 minute spiniform tubercles on ventrodiscal margin and 2 or 3 minute tubercles on mesial surface ventrally; small gonopore present on either side. Basis incompletely fused with ischium; ventral margin

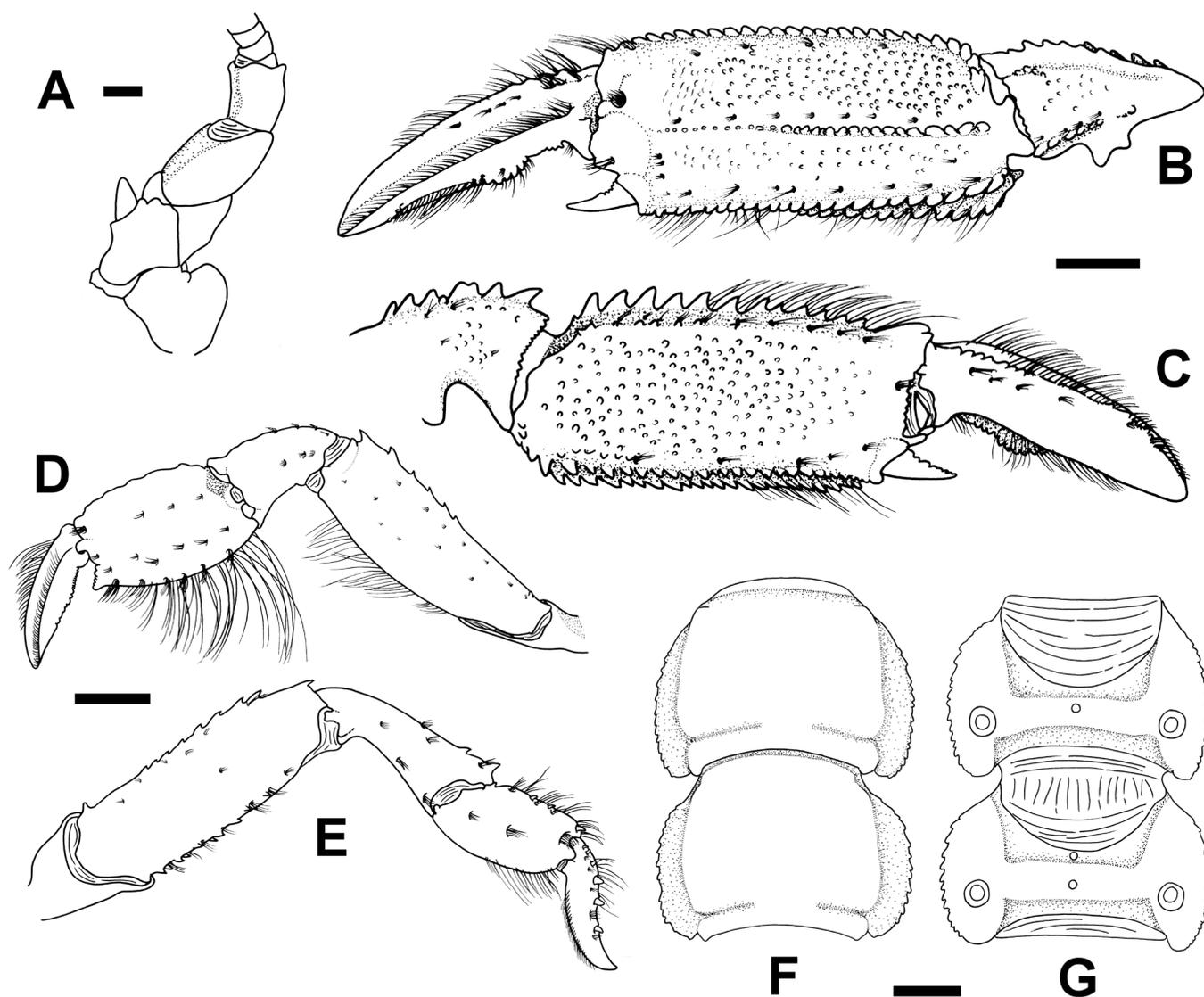


Fig. 4. *Thalassina pratas*, new species, holotype, female (cl 44.4 mm), NMNS 6772-012. A, right antennal peduncle, lateral view; B, chela of right pereopod I, mesial view; C, chela of right pereopod I, lateral view; D, left pereopod II, lateral view; E, right pereopod III, lateral view. F, pleomeres 3 and 4, dorsal view; G, same, ventral view. Scale bars = 5 mm.

unarmed. Ischium similar to that of pereopod 2, widened distally, articulation to merus less oblique; ventral margin slightly sinuous, with 3 small tubercles. Merus with row of small spines or tubercles on dorsal margin, generally decreasing in size proximally, distalmost spine terminal, curved, proximal most spine slightly smaller than terminal spine; lateral surface with 1 row of setal punctate dorsally; ventral surface weakly bicarinate, outer carina with row of minute spines in proximal two-thirds and inner carina with larger spines or spiniform tubercles almost over entire length. Carpus widened distally; dorsal margin with prominent distal spine (in right side 1 additional small spine remote from distal margin); lateral surface convex, with few setal punctate. Propodus strongly compressed laterally, with 3 (right) or 4 (left) corneous tubercles and tufts of stiff setae on dorsal margin; lateral surface with small setal field distally followed by few widely separated setal punctate on midline; ventral margin with rather sparse stiff setae. Dactylus subequal in length to propodus, twisted, sinuous, terminating in blunt corneous tip; dorsal surface laterally with row of 6 corneous tubercles and tufts of stiff setae;

lateral surface with narrow longitudinal setal field adjacent to ventral margin; mesial face also with narrow setal fields adjacent to dorsal margin; ventral margin with row of closely spaced, minute, microscopic corneous spinules.

Pereopod 4 (Fig. 1B; only right side preserved, but left side still present in photographs) generally similar to pereopod 3. Coxa with 3 (left) or 5 (right) minute tubercles on ventrodorsal margin, and 3 (left) or 4 (right) minute tubercles ventrally on mesial surface. Merus with row of minute tubercles on dorsal margin, weakly bicarinate ventral surface with row of minute tubercles on lateral side and row of 8 spines and 1 row small tubercles on mesial side. Carpus with 2 dorsodistal spines closely spaced (proximal spine minute). Propodus with 4 corneous tubercles on dorsal margin. Dactylus dorsal surface laterally with row of 7 corneous tubercles.

Pereopod 5 (Fig. 1B) oriented posteriorly in normal position. Coxa large, with 2 prominent spines on anterolateral ridge, and vertical row of 1 prominent spine and 3 (right) or 4 (left) minute tubercles on posteromesial face. Merus with

minute tubercles on proximal one-third of extensor surface; ventral surface slightly bicarinate, outer side with row of 5 minute spiniform tubercles, inner side unarmed. Carpus and propodus unarmed, latter with prominent tufts of stiff setae on outer surface and dense stiff setae along inner distal margin. Dactylus subconical, slightly twisted, becoming corneous distally; outer surface with corneous ridge extending from midlength to tip adjacent to flexor margin.

Pleopod 1 uniramous, elongate, 2 segmented. Pleopod 2–5 slender, biramous; protopods unarmed; no appendix interna.

Uropod with protopod incompletely fused basally. Rami both slender, tapered to blunt apices, sparsely setose on lateral margin and ventral surface, almost glabrous on dorsal surface; endopod slightly longer than exopod, slightly incurved distally; exopod slightly upturned in lateral view.

Colouration in life. Carapace orange-brown on dorsum, lateral surface whitish; pleon also orange-brown in terga, but pleura whitish; pereopods brown-orange in dorsal sides, whitish in ventral sides; cornea of eye blackish (Fig. 1A).

Distribution. Known only from the type locality, Dongsha Island in the South China Sea, in fully marine seagrass beds at depths of 1–2 m.

Etymology. The species is named after the type locality (Pratas = Dongsha Island), used as a noun in apposition. It also alludes to the new species' unusual presence in a seagrass bed, since the Latin "*pratium*" means grass lawn or meadow.

Remarks. The new species is most similar to *Thalassina spinosa*. Shared characters include: a terminally blunt rostrum, with tubercles on the lateral margins; a long posterodorsal median process of the carapace; sternites of pleomeres 2–5 each with one or two median tubercles, but no lateral tubercles; and a cervical groove on the carapace bordered by conspicuous tubercles or spines at least laterally. However, *T. pratas*, new species, can be readily distinguished from *T. spinosa* by the less spinose carapace surface. In *T. spinosa*, the carapace is armed with scattered conspicuous spines on the postcervical dorsum and lateral surfaces (branchiostegites, Ngoc-Ho & de Saint Laurent, 2009: fig. 13C), but these spines are limited to the lateral parts of the cervical groove and dorsal part of the branchiostegite adjacent to linea thalassinica in the new species. The anterolateral carinae on the carapace are nearly smooth in *T. pratas*, new species, rather than distinctly tuberculate as in *T. spinosa* (see Ngoc-Ho & de Saint Laurent, 2009: fig. 10C). Pleural marginal tubercles are less sharp in the new species than in *T. spinosa* (Ngoc-Ho & de Saint Laurent, 2009: 144, fig. 16B). The antennal scale is small but well developed in *T. pratas*, new species, while it is minute or absent in *T. spinosa* (see Ngoc-Ho & de Saint Laurent, 2009: 144, fig. 10C). Armature on the dactylus of pereopod 3 consists of blunt corneous tubercles in *T. pratas*, new species, rather than sharp corneous spines as in *T. spinosa* (see Ngoc-Ho & de Saint Laurent, 2009: 144, fig. 10G).

Thalassina pratas, new species, is also somewhat similar to *T. anomala* in the shape of the rostrum and the non-spinose lateral surfaces of the carapace. However, the cervical groove of the carapace being bordered laterally by sharp spines readily distinguishes the new species from *T. anomala*, which has no spines on the ridge defining the cervical groove. Moreover, the spination on the meri of pereopods 3 and 4 is stronger in the new species than in *T. anomala*.

In the holotype of the Miocene fossil taxon *Thalassina emerii*, only a fragment of the frontal part of the carapace, lateral parts of the carapace (branchiostegites), entire pleon, and basal parts of pereopods were preserved (Bell, 1844). A Miocene fossil of the left chela from Australia was also illustrated by Ngoc-Ho & de Saint Laurent (2009: fig. 7C). In the holotype of *T. emerii*, the branchiostegites of the carapace are covered with small but conspicuous granules, which are absent in the holotype of *T. pratas*, new species; the rostral apex of the holotype of *T. emerii* is acute, rather than blunt in *T. pratas*, new species. The armament of the palm of pereopod 1 is also different. For example, tubercles on the dorsolateral carina are stronger and fewer in *T. pratas*, new species, than in the additional fossil specimen referred to *T. emerii* (Fig. 4A versus Ngoc-Ho & de Saint Laurent, 2009: fig. 7C); the lateral surface of the palm is coarsely granulate in *T. pratas*, new species (Fig. 4A), rather than apparently smooth in the additional fossil of *T. emerii* (Ngoc-Ho & de Saint Laurent, 2009: fig. 7C). Considering these characters, these two taxa are not conspecific.

During this study, some characters used in the identification key proposed by Sakai & Türkay (2012) were found to be difficult to use or interpret. For example, in discriminating between *T. gracilis* and their new species, *T. australiensis*, Sakai & Türkay (2012) differentiated the armature of the lateral rostral margins as follows: "rostral lateral margins with 9 tubercles, extending posteriorly as carinae with 3–4 tubercles" for *T. gracilis*, while "rostral lateral margins with tightly arranged, flat tubercles, extending posteriorly as carinae with flat tubercles" for *T. australiensis*. However, it is impossible to apprehend the actual differences of this character between these two species. Thus, a different key, incorporating the new species, and based mainly on the key proposed by Ngoc-Ho & de Saint Laurent (2009) is suggested below.

Key to the extant species of *Thalassina*

1. Rostrum with blunt tip; posterodorsal median process of carapace long or short; sternites of pleomeres 2–5 each with median or lateral tubercles.....2
 - Rostrum with acute or subacute tip; posterodorsal median process of carapace short; sternites of pleomeres 2–5 only with lateral tubercles on either side of midline.....5
2. Lateral margin of rostrum and dorsolateral carina of pereopod 1 palm with conspicuous tubercles.....3
 - Lateral margin of rostrum and dorsolateral carina of pereopod 1 palm without conspicuous tubercles or at most with obsolescent tubercles [posterodorsal median process of carapace long; tergites of pleomeres 2–5 each with median tubercles].....*T. krempfi*

3. Posterodorsal median process of carapace long; dorsolateral carina of pereopod 1 palm extending over entire length.....4
- Posterodorsal median process of carapace small; dorsolateral carina of pereopod 1 palm extending to half or proximal three-fourths length.....6
4. Cervical groove of carapace unarmed or bordered with a few tubercles; merus of pereopod 3 with minute spines on dorsal margin in limited extent..... *T. anomala*
- Cervical groove of carapace bordered with spines at least laterally; merus of pereopod 3 with row of conspicuous spines on dorsal margin over entire length 5
5. Postcervical carapace covered with numerous spines; cervical groove bordered by row of spines entirely *T. spinosa*
- Postcervical carapace only armed with a few spines adjacent to linea thalassinica; cervical groove bordered by spines only laterally *T. pratas*, new species
6. Postrostral median groove extending beyond posterior ends of rostral lateral carinae; male gonopod 1 generally slender with 3 or 4 conspicuous teeth on lateral margin proximally *T. kelanang*
- Postrostral median groove not reaching posterior ends of rostral lateral carinae; male gonopod 1 generally broad, unarmed on lateral margin..... *T. squiamifera*
7. Lateral margins of rostrum with tubercles only.....8
- Lateral margins of rostrum and anterolateral margins of carapace with tubercles and spines [pereopod 1 merus with large spines on ventral margin proximally, palm with dorsolateral carina extending almost over entire length, lateral ventral carina with spiniform tubercles and spines; sternites of pleomeres 2–5 with lateral tubercles only in males, no lateral tubercles in females]..... *T. spinirostris*
8. Pereopod 1 merus with large spines on ventral margin proximally, palm with dorsolateral carina extending nearly over entire length; sternites of pleomeres 2–5 with faint lateral tubercles in males, no lateral tubercles in females *T. gracilis*
- Pereopod 1 merus without large spines on ventral margin proximally, palm with dorsolateral carina extending to about midlength; sternites of pleomeres 2–5 with lateral tubercles and often numerous anterior tubercles 9
9. Pereopod 1 palm with covering of granules on space between dorsolateral and dorsomesial carinae, latter carina with 14–16 spiniform tubercles..... *T. saetichelis*
- Pereopod 1 palm without covering of granules on space between dorsolateral and dorsomesial carinae, latter carina with 18–23 blunt tubercles *T. australiensis*

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