New Paralomis from the Mid-Okinawa Trough

upper angle is armed with a stouter spine which is about half as long as outer spine; antennal acicle has a long terminal and three outer spines, and three spinules on inner upper surface, slightly overreaching end of rostral spine and nearly reaching distal end of last segment of antennal peduncle.



Fig. 3. *Paralomis jamsteci* sp. nov. — A, carapace of holotype ovig. \mathcal{Q} (NSMT); B, abdomen of paratype \mathcal{J} (NSMT); C, abdomen of paratype ovig. \mathcal{Q} (USNM).

Right cheliped larger than the left as usual, but subequal to and not much different from the left except for cutting edges of fingers; inner angle of merus armed with a long spine and a shorter spine close to it followed by some small tubercles in a curved row toward to upper border of merus; a subterminal shallow groove or depression along distal margin which is armed with some low teeth. Carpus flattened on its

Masatsune TAKEDA and Jun HASHIMOTO

outer surface, with minute rough granules of variable size; inner border armed with a proximal spine directed obliquely upward, and with a three-spined crest directed inward; both of antero-inner and antero-outer angles more or less tuberculated. Both surfaces of palm and fingers provided with many brush-like bundles of longish setae; upper border of palm armed with three tuberculate teeth directed forward in both chelipeds; both fingers of right cheliped each with some prominent teeth on cutting edge, but the fingers of left cheliped are prehensile in function without teeth.

Ambulatory legs elongate. Meri depressed moderately, roughened with microscopical granules and studded with some sharp granules which are arranged in a line on median part of proximal third of upper surface; anterior border of each merus armed with six sharp teeth along distal two thirds, one of which is placed at the terminal; distal three teeth always strongly developed, but the penultimate is slightly smaller than the adjacent ones; proximal three apparently smaller than distal three, variable in size and followed with one or two granules; posterior border also armed with four sharp teeth and one or two accessory small ones along its whole length; in first pair this armature is not prominent. Carpus widening distally, convex dorsally along its posterior border and truncated obliquely toward anterior border; three small tubercles in a line on upper surface; anterior border armed with four serrated teeth, proximal one of which is very small, but always distinct. Propodus strongly depressed; anterior border cut into several serrated teeth along whole length; posterior border also more or less serrated, with several tufts of setae. Dactylus also depressed, curved distally, two thirds, or more, as long as propodus, being armed with several to ten dark-colored horny spines along posterior border and fringed with tufts of setae.

Abdomen covers sternum and most parts of ventral surfaces of ambulatory coxae as usual; whole surface covered with somewhat scaly, rough granules similar to, but more prominent than, those on dorsum of carapace, and also with wrinkles mainly on and along median plates; margin of each plate weakly upturned.

Notes on paratypes. Two ovigerous females are in general very close to the holotype ovigerous female, but the number and size of the teeth along the hepatic and anterior branchial margins are individually variable. Also, the crest at the posterior part of branchial region is partly damaged at left side in the larger female and at right side in the smaller female. The armature of the antennal acicle is basically similar to that of the holotype, but the length of spines is also somewhat variable. The formation of the ambulatory legs is quite like that of the holotype in the larger female, but in the smaller female the right second and left third ambulatory legs are armed with sharp teeth unlike the serrated teeth in the holotype.

Remarks. It is really remarkable that many new species of the genus *Paralomis* have been described since 1970s, probably due to biological and fishery interests in the deep-sea fauna with better-equipped research vessels and fishing boats of larger tons. According to MACPHERSON (1988 a-c, 1989) who revised the Atlantic species and also described several new species from various parts of the Pacific, Indian and Antarctic Oceans, altogether 46 species are referred to the genus *Paralomis*. It is mentioned at

84

New Paralomis from the Mid-Okinawa Trough

present that the systematic status of some species is still unstable and *P. heterotuber*culata TUNG, WANG et LI, 1984 is in all probability synonymous with *P. truncatispinosa* Takeda et Miyake, 1980, both from the East China Sea. This species is quite characteristic in having the carapace covered with high wart-like tubercles of good size and fringed with long spines.



Fig. 4. *Paralmois jamsteci* sp. nov. — A and B, carapace and chelae of paratype ovig. \mathcal{Q} (MNHN); C, paratype \mathcal{J} in dorsal view; D, carapace of paratype ovig. \mathcal{Q} (USNM).

Among 45 species currently referred to the genus *Paralomis*, the closest congener of the present new species seems to be *P. africana* MACPHERSON from off Namibia between 20°31' and 24°50'S, 570–770 m deep. This means in turn that the new species has some resemblance in the formation of the carapace to *P. anamerae* MACPHERSON from north of the Falkland Islands, 132–135 m deep, *P. pectinata* MACPHERSON from Venezuela, 1,409–1,629 m deep, *P. cristulata* MACPHERSON from Guinea Bissau and Senegal, 261–650 m deep, and *P. cristata* TAKEDA et OHTA from Suruga Bay, Japan, 700–750 m deep.

The differences enumerated for *P. anamerae* and *P. africana* by MACPHERSON (1988 b) are also adapted to *P. anamerae* and the present new species. The carapace is thickly covered with small granules, the antennal peduncle is armed with three spines

85