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Redescription of *Argis hozawai* (YOKOYA, 1939)
from Northern Japan
(Crustacea, Decapoda, Crangonidae)

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Redescription of *Argis hozawai* (YOKOYA, 1939)
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ABSTRACT *Argis hozawai* (YOKOYA, 1939), which has been known only by the original description from off Miyagi Prefecture, northern Japan, and the subsequent reports from Korea made by KIM and PARK (1972) and KIM (1976; 1977), is described and illustrated in detail based on specimens recently collected from the Pacific coast of northern Japan. Though *A. hozawai* closely resembles *A. lar* (OWEN, 1839), it is distinguishable from the latter by the presence of a tooth-like tubercle just behind the rostrum, more distinct median carina of the anterior two abdominal somites in the female, and the proportionately stouter palm of the first pereopod. *Nectocrangon lar kobjakovi* VINOGRADOV, 1950, which was synonymized with *A. lar* by ZARENKOV (1960), is placed in synonym with *A. hozawai*. The present material and review of the previous literature on *A. lar* suggest that *A. hozawai* is confined to Asian waters. Notes on the biology and coloration of the living animal are also provided.

Recent collections made on the Pacific coast of northern Japan, extending from off Miyagi Prefecture, Honshu Mainland, to off eastern Hokkaido in 1987–1990, have provided two types of crangonids belonging to the genus *Argis*, which were captured at the depths of 10 to 512 m. These two types were apparently distinguishable by the presence or absence of a tooth-like tubercle just behind the rostrum. Detailed examination of the material proved that the two types were distinct from each other. The type lacking the tubercle belongs to *A. lar* (OWEN, 1839) without doubt; another type bearing the tubercle agrees in general with the brief original description and figure of *Nectocrangon hozawai* YOKOYA, 1939 from off Miyagi Prefecture, northern Japan. The latter species has been reported only from Korea by KIM and PARK (1972) and KIM (1976; 1977), besides the original description. Both species were of common occurrence in the sublittoral zone of the surveyed area and often were captured sympatrically. Thus it is suggested that the poor previous records of *A. hozawai* may be due to taxonomic confusion with *A. lar*. Further, *Nectocrangon lar kobjakovi* VINOGRADOV, 1950 from Asian Russian waters, which is also characterized by the presence of a tubercle behind the rostrum, is strongly suggested to be synonymous with *A. hozawai*, though the former was placed as a synonym of *A. lar* by ZARENKOV (1960). These taxonomic problems led the authors to redescribe *A. hozawai* and to review the previous literature on *A. lar*. Some information on the biology of *A. hozawai* are included in this report. Specimens have been

deposited at the Laboratory of Marine Zoology, Faculty of Fisheries, Hokkaido University (HUMZ). Abbreviation CL indicates postorbital carapace length. The terms tooth and spine are defined as follows: tooth = acute or blunt projecting structure lacking basal suture, thus immovable; spine = acutely projecting structure with distinct basal suture, thus movable. The names of the structures of the carapace follow mainly BUTLER (1980).

Description

Argis hozawai (YOKOYA, 1939)

(Figs. 1–5)

Nectocrangon hozawai YOKOYA, 1939: 276, fig. 9 [type locality: about 5 miles off Ozaki, Miyagi Pref., 130 fathoms].—ZARENKOV, 1965: 1764 (list).—KIM and PARK, 1972: 207, pl. 5, fig. 4.—KIM, 1976: 146.—KIM, 1977: 31, pls. 32, 54, figs. 66a, b, textfigs. 135, 138.

Nectocrangon lar, RATHBUN, 1904: 137, figs. 74, 75 (in part).—KOBJAKOVA, 1937: 140, fig. 12 (? in part).—ZARENKOV, 1960, 349 (in part).

Nectocrangon lar *kobjakovi* VINOGRADOV, 1950: 221 (key) [type locality: Sea of Japan and Sea of Okhotsk].

Nectocrangon lar var. *kobjakovi*, KOBJAKOVA, 1958: 229.

Nectocrangon crassa, KIM and PARK, 1972: 207, pl. 5, fig. 6 (not RATHBUN, 1899).

Material. HUMZ-C 27, off Miyako, Iwate Pref., 150–200 m, 4 April 1987, trawl, 4 females (2 ovigerous) (18.0–22.4 mm CL), coll. T. KOMAI; HUMZ-C 559, off Kinkasan, Miyagi Pref., 38°20'N, 141°44'E, 155 m, 28 May 1988, trawl, 2 females (16.3, 17.0 mm CL), coll. D. KITAGAWA; HUMZ-C 958, off Kinkasan, 38°29.8'N, 141°41.0'E, depth not recorded, otter trawl (R/V

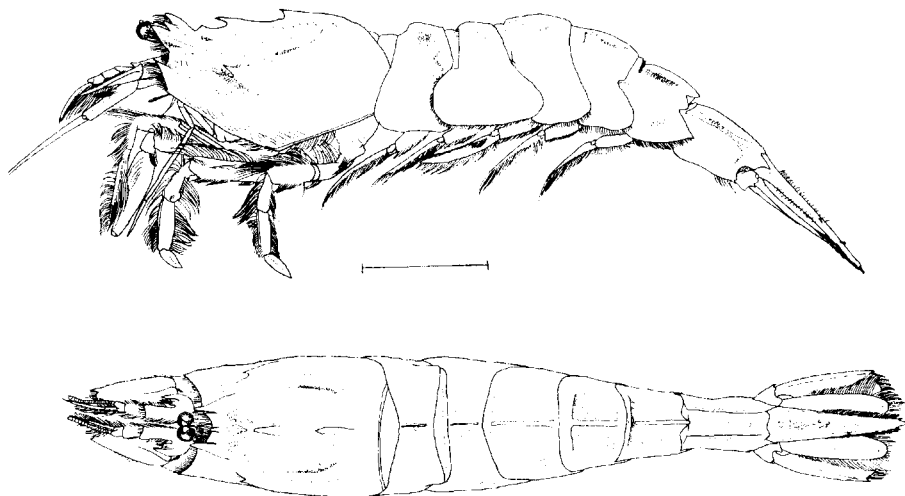


Fig. 1. *Argis hozawai* (YOKOYA, 1939). HUMZ-C 395, female. Entire animal in lateral and dorsal aspects. (Scale=10 mm).

Tanshu-Marū), 2 females (24.1, 24.6 mm CL), coll. O. YAMAMURA; HUMZ-C 959, off Miyako, 150–200 m, 10 March 1985, trawl, 5 females (17.7–21.1 mm CL), coll. T. KOMAI; HUMZ-C 961, off Tomakomai, Hokkaido, depth not recorded, June 1989, otter trawl (R/V Ushio-Marū), 4 females (18.6–20.0 mm CL), coll. F. MUTO; HUMZ-C 962, off Rausu, eastern Hokkaido, depth and date unknown, trawl, 1 female (22.3 mm CL), coll. H. MASUDA; HUMZ-C 963, off Usujiri, Hokkaido, 10–30 m, 9 Sept. 1989, dredge, 2 juveniles (4.7, 6.8 mm CL), coll. T. KOMAI; HUMZ-C 964, off Usujiri, 10–25 m, 15 Nov. 1989, 4 juveniles (5.1–5.5 mm CL), coll. T. KOMAI; HUMZ-C 1069, off Hamanaka, Hokkaido, 42°52.88'N, 145°21.84'E, 145 m, 4 June 1990, beam trawl (R/V Tanshu-Marū), 13 females (12.5–18.5 mm CL), coll. T. KOMAI.

Comparative material. *Argis lar*: HUMZ-C 247, Bering Sea, 58°20.91'N, 101°37.9'W, 34 m, 4 females (25.2–27.0 mm CL), coll. unknown; HUMZ-C 425, Uchiura Bay, Hokkaido, depth not recorded, 15 July 1969, otter trawl, 3 females (20.7–22.6 mm CL), coll. T. IGARASHI; HUMZ-C 482, data unknown, 3 females (17.0–19.0 mm CL); HUMZ-C 965, off Kitami Monbetsu, Okhotsk coast of Hokkaido, depth not recorded, 3 Sept. 1970, trawl, 5 females (15.8–30.0 mm CL); HUMZ-C 966, off Tomakomai, depth not recorded, June 1989, otter trawl (R/V Ushio-Marū), 7 females (20.6–21.2 mm CL), coll. F. MUTO; HUMZ-C 1055, off Hiroo, Hokkaido, 42°16.31'N, 143°21.89'E, 512 m, 30 May 1990, otter trawl (R/V Tanshu-Marū), 3 females (11.0–21.4 mm CL), coll. T. KOMAI; HUMZ-C 1071, off Erimo, Hokkaido, 41°37.29'N, 143°21.89'E, 251 m, 29 May 1990, otter trawl (R/V Tanshu-Marū), 6 males (6.8–11.2 mm CL), 11 females (10.9–22.0 mm CL), coll. T. KOMAI; HUMZ-C 1072, off Hamanaka, 42°52.88'N, 145°21.84'E, 145 m, 4 June 1990, beam trawl (R/V Tanshu-Marū), 6 females (16.3–19.4 mm CL), coll. T. KOMAI; HUMZ-C 1073, off Hamanaka, 42°50.98'N, 145°18.75'E, 216 m, 5 June 1990, beam trawl (R/V Tanshu-Marū) 4 juv. (6.8–9.3 mm CL), coll. T. KOMAI.

Description. Body (Fig. 1) stout, subcylindrical; integument thick, somewhat sculptured, covered with short pubescence and sparse setae.

Rostrum (Fig. 2A) very short, projecting almost as far as postorbital tooth, obliquely erect, apex rather blunt. Carapace (Fig. 1, 2A) widened posteriorly from dorsal aspect, 1.2–1.4 times as long as greatest width, frontal region elevated; anterior margin fringed with fine setae; postrostral median carina extending to posterior margin of carapace, armed with 2 acute tooth at anterior 1/3 and posterior 2/5 of carapace length respectively, and further with a distinct tubercle compressed laterally just behind rostrum; postorbital and antennal teeth placed close to each other, directed upward, forming subcylindrical orbit together with rostrum, latter much wider than former; branchiostegal tooth rather strong, ascending, slightly falling short of tip of antennal tooth, supported by short, blunt carina; pterygostomial tooth tiny; hepatic tooth acute, situated at or slightly anterior to level of anterior median tooth; postorbital carina weak, extending beyond posterior 1/4 of carapace length, posterior oblique part not abruptly delimited; branchial region without distinct carina; hepatic groove distinct; longitudinal suture absent.

Abdomen (Fig. 1) having relatively high, strongly compressed median carina on 1st to 5th somite, that on 5th somite projecting beyond posterior margin as acute tooth; dorsal profile of median carinae on anterior 2 somites weakly convex.

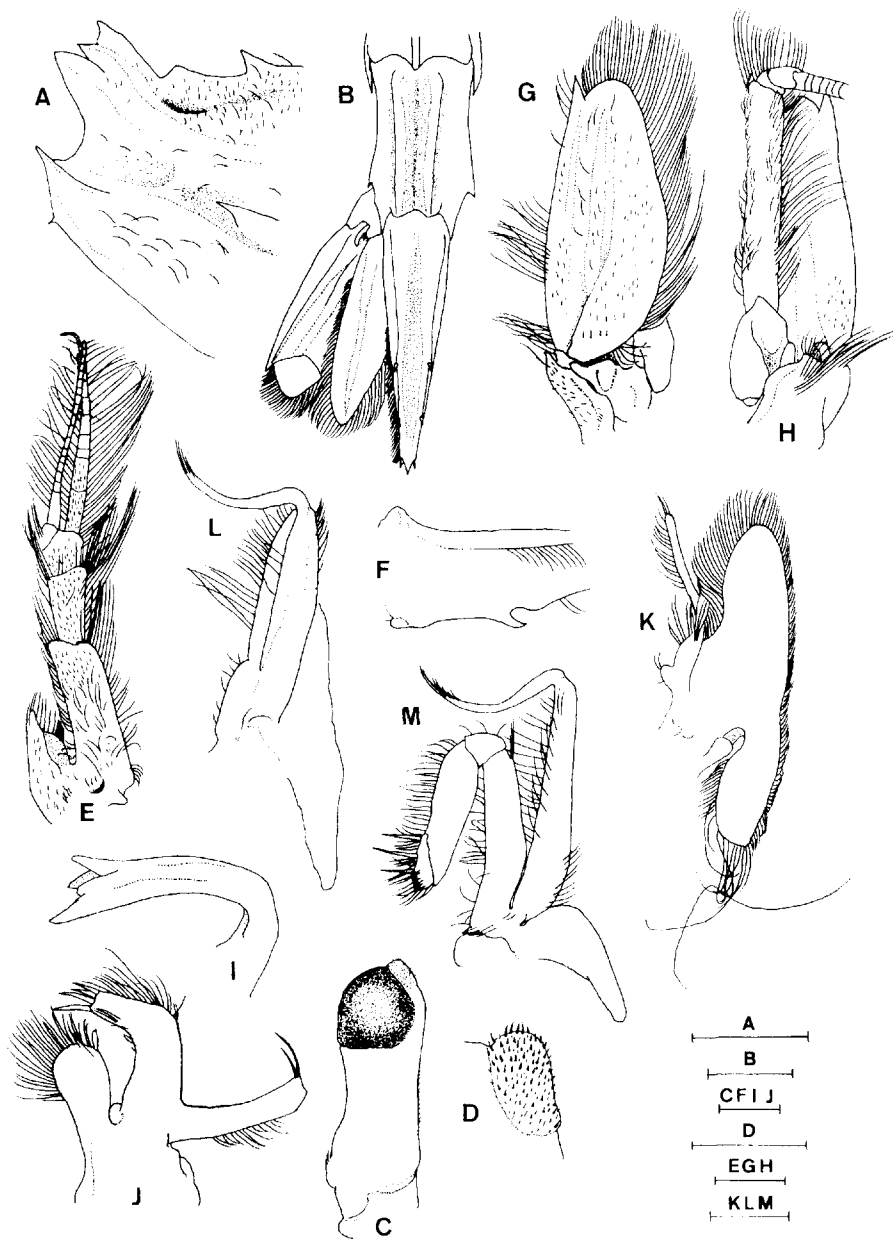


Fig. 2. *Argis hozawai* (YOKOYA, 1939). HUMZ-C 959, female. Body parts and left appendages. A, anterior part of carapace, lateral; B, posterior part of abdomen, dorsal, right uropod omitted; C, eye, dorsal; D, same, eye tubercle; E, antennule, dorsal; F, same, posterior part of proximal segment of peduncle, mesial; G, antenna, dorsal; H, antenna, ventral; I, mandible; J, maxillule; K, maxilla; L, 1st maxilliped; M, 2nd maxilliped. (Scales: 5 mm in A, B; 2 mm in E, G, H, K, L, M; 1 mm in C, D, F, I, J)

Pleura of 1st to 4th somite broadly rounded ventrally, that of 5th armed with posteroventral tooth. Fourth somite with anterior transverse carina not interrupting median carina. Fifth somite also having anterior transverse carina abruptly delimited posteriorly, and interrupting median carina. Sixth somite (Fig. 2B) 0.4–0.5 times as long as carapace, 1.4 times as long as proximal width, with pleura slightly flaring; paired dorsal carinae prominent, slightly converging posteriorly, extending beyond dorsoposterior margin as obtuse lobes; lateral surface with obscure longitudinal carina; posterolateral process strong, sharply pointed; posteroventral angle acute. Telson (Fig. 2B) 0.7–0.9 times as long as carapace, far exceeding distal end of uropods, tapering to acute tip, armed with 3 pairs of spines in posterior half, anterior 2 pairs placed on dorsolateral ridges, last pair on lateral margin near apex; dorsal surface deeply sulcate.

Thoracic sternum widened posteriorly, armed with 4 procurved teeth diminishing in size posteriorly, anteriormost tooth very long, slender; in ovigerous specimens posterior 3 teeth reduced, showing as tubercles. Abdominal sternites bearing median tubercle on each of 1st to 5th somites.

Eyestalks (Fig. 1, 2C) contiguous, almost cylindrical, embraced by fusion of rostrum, postorbital, and antennal teeth; cornea as wide as and much shorter than eyestalk; eye tubercle (Fig. 2D) blunt, situated anteromesially, covered with short setae.

Antennule (Fig. 2E, 2F) densely setose, peduncle reaching about distal 1/4 of scaphocerite; proximal segment of peduncle longer than combined length of distal two segments, armed with acute ventromesial tooth, anterolateral angle somewhat produced; stylocerite rather broad, overreaching middle of proximal segment, apex pointed, mesial margin sinuous; outer flagellum slightly longer than outer flagellum, fringed with long setae. Antenna (Fig. 2G, H) with stout basicerite bearing ventrolateral tooth; scaphocerite about 0.4 times as long as carapace, 1.9–2.5 times as long as wide, with 3 blunt longitudinal ridges on dorsal surface, lateral margin convex, partly fringed with long setae, distolateral tooth reaching or slightly overreaching broadly rounded anterior margin of blade; carapocerite long, almost reaching distal margin of scaphocerite, with tuft of long setae anteriorly; flagellum stout, spinose, shorter than body.

Mouthparts of usual crangonid type. Mandible (Fig. 2I) consisting only of slender molar process 4-toothed distally. Maxillule (Fig. 2J) with well developed, spatulate proximal endite fringed with setae mesially; distal endite strongly curved, distal margin truncated, bearing 5 stout spines; palp slender, almost straight, bearing 2 setae at distomesial angle. Maxilla (Fig. 2K) with small, rounded proximal endite; distal endite vestigial, with broadly convex mesial margin; palp long, overreaching anterior end of scaphognathite, basal part and mesial margin bearing setae; scaphognathite with posterior lobe moderately elongate, fringed with long setae posteriorly. First maxilliped (Fig. 2L) with narrow, flattened palp, reaching distal end of peduncle of exopod; endite obsolete, poorly setose; caridean lobe extremely narrow, extending over entire length of peduncle of exopod; epipod large, lacking lateral notch, tapering posteriorly. Second maxilliped (Fig. 2M) with endopod 5-segmented, pediform; dactylus obliquely articulated to propodus, armed with 3 mesial spines, distal part with thick assemblage of stout setae; propodus elongate, fringed only with setae mesially; exopod 2-articulated, proximal segment narrowed distally, far exceeding

anterior end of endopod; epipod sickle-shaped, without podobranch. Third maxilliped (Fig. 3A) overreaching scaphocerite by length of ultimate segment; distal 2 segments spatulate, fringed with fine setae marginally, mesial surface armed with many spines below setae; antepenultimate segment armed with sub-distal spine on ventromesial surface, dorsodistal part somewhat produced, with long fine setae; exopod 2-articulated; coxal process lacking epipod.

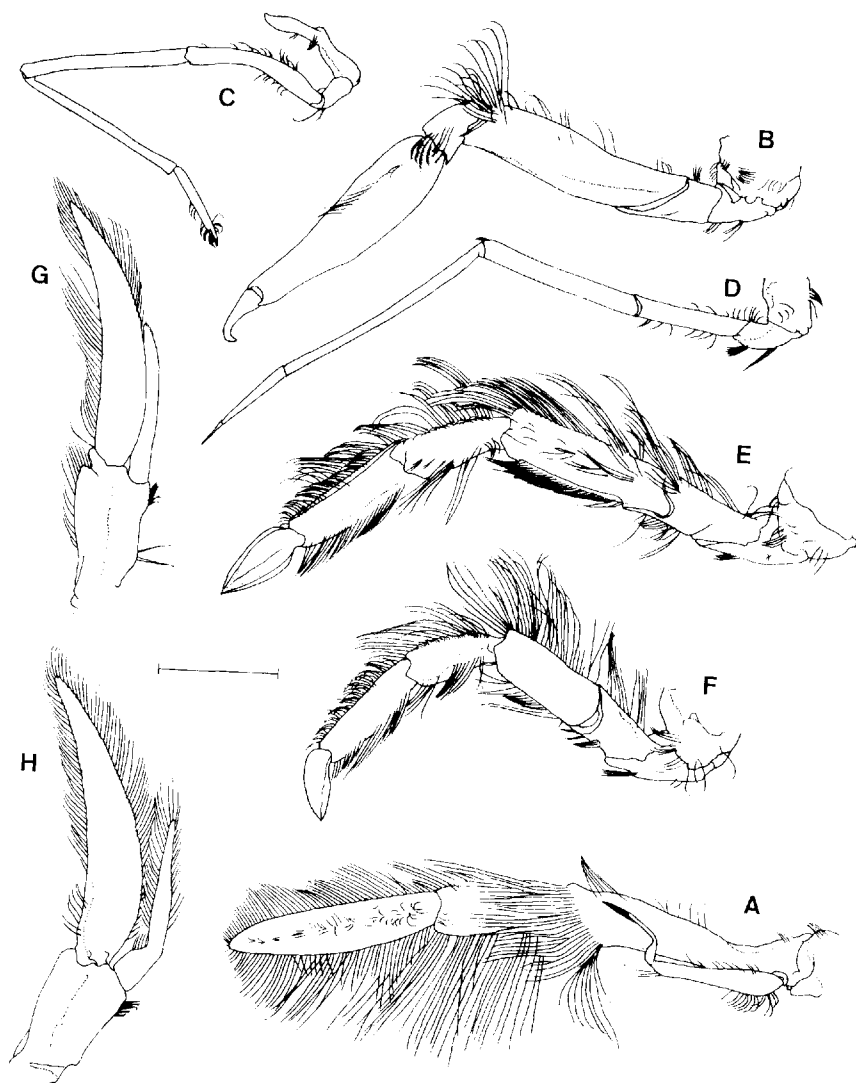


Fig. 3. *Argis hozawai* (YOKOYA, 1939). HUMZ-C 959, female. Left appendages. A. 3rd maxilliped, dorsal; B. 1st pereopod; C. 2nd pereopod; D. 3rd pereopod; E. 4th pereopod; F. 5th pereopod; G. 1st pleopod, dorsal; H. 2nd pleopod, dorsal. (Scale=5 mm)

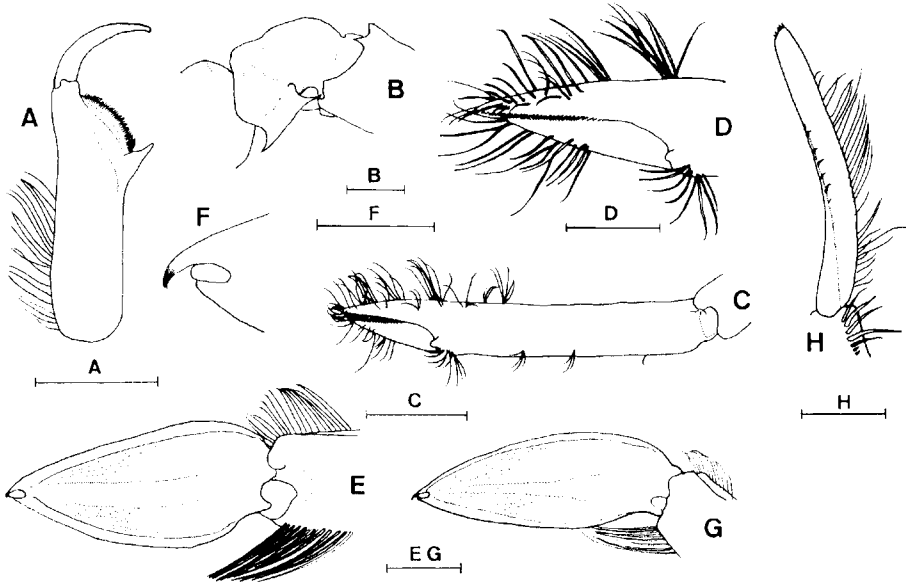


Fig. 4. *Argis hozawai* (YOKOYA, 1939). HUMZ-C 959, female. Parts of appendages. A, chela of 1st pereopod, dorsal; B, carpus and distal part of merus of 1st pereopod, lateral; C, chela of 2nd pereopod, lateral; D, same, distal part; E, dactylus of 4th pereopod, lateral; F, same, distal part; G, dactylus of 5th pereopod, lateral; H, endopod of first pleopod, mesial. (Scales: 5 mm in A; 2 mm in B; 1 mm in C, E, G, H; 0.5 mm in D, F)

First pereopod (Fig. 3B, 4A, B) stout, exceeding scaphocerite by length of distal 1/3 of chela; chela somewhat flattened, 3.25–3.80 times as long as wide, with row of setae on lateral side, prehensile edge obliquely transverse, with submarginal row of setae, fixed finger stout, flattened; carpus with an acute tooth on anteroventral angle; merus armed with rather weak dorsodistal tooth, flexor surface unarmed. Second pereopod (Fig. 3C, 4C, D) slender, chelate, reaching scaphocerite; chela with dactylus 0.3–0.4 times as long as palm, prehensile edges of dactylus and fixed finger pectinated with minute spinules; carpus equal to merus; ischium considerably curved inward; coxal process strong. Third pereopod (Fig. 3D) as slender as 2nd, overreaching scaphocerite by length of distal 2 segments; dactylus about 0.5 times as long as propodus; carpus more than 2 times as long as combined length of distal two segments. Fourth pereopod (Fig. 3E, 4E, F) stout, densely setose except for dactylus, compressed laterally, exceeding scaphocerite by length of dactylus; dactylus spatulate, 0.75–0.80 times as long as propodus, weakly carinate medially on lateral surface, margins raised as sharp ridge on lateral surface, apex apparently pointed, exceeding terminal spine mounted at apical portion, bearing tuft of setae; propodus having sharp longitudinal ridge along extensor margin; carpus about 0.9 times as long as propodus. Fifth pereopod (Fig. 3H) similar to 4th morphologically, but considerably shorter, reaching anterior margin of carapace; dactylus 0.50–0.60 times

as long as propodus; carpus about 0.8 times as long as propodus.

All pleopods lacking appendix interna; protopodite (Fig. 3G, H) bearing 5 or 6 spiniform setae longitudinally arranged at anteromesial part, ventrolateral angle rounded. First pleopod (Fig. 3G, 4H) with endopod more than half length of exopod, compressed laterally, central part of dorsomesial margin fringed with curved spinules, distal part bearing several minute spinules. Second to fifth pleopods (Fig. 3H) with endopod curved laterally at about proximal 1/3. Uropod (Fig. 2B) with protopodite bearing sharply pointed posterolateral angle; endopod with longitudinal carina on dorsal surface; exopod slightly falling short of distal margin of endopod, having 2 longitudinal carinae converging proximally on dorsal surface, lateral margin slightly convex, ending in acute tooth posteriorly, but without spine, diaeresis distinct.

Pleurobranch gills present on 4th to 8th thoracic somite; arthrobranch absent.

Color in life. Background yellowish brown over most of body and appendages. Carapace with brown to buff spots forming diagonal bars and bands, and bordering anterior margin including rostrum; gastric region often whitish. Abdomen with brown on buff patches on dorsal and lateral sides, forming dark diagonal bars on third to fourth somites, and complex patterns on sixth somite; middorsal carinae colored with dark brown; ventral margin of pleura reddish in large individuals. Eggs grayish green in early stages.

Biological notes. *Argis hozawai* is commonly found on the sandy or muddy bottom of the continental shelf around northern Japan and seems to prefer shallower depths than *A. lar*. For example, on the coast of Iwate Prefecture, *A. hozawai* was usually found at 100–250 m depths, whereas *A. lar* occurred at depths greater than 300 m. This may suggest that these two species segregate their habitat vertically in this area. On the Pacific coast of Hokkaido, the two species were sympatrically captured even in depths shallower than 200 m, though *A. lar* further extends its vertical range to greater depths of over 500 m.

Adult specimens of the present collection of *A. hozawai* are all females. The sex could not be determined in small specimens (<6.8 mm CL). Therefore evidence of protandry could not be obtained, though a congener, *A. dentata* (RATHBUN, 1902), was shown to be a protandrous hermaphrodite (FRÉCHETTE and CORRIVAUULT, 1970).

The ovigerous females were seen from January to May in the coast of Iwate Prefecture. The eggs are moderately large, measuring 1.5×1.3 mm on average.

The individuals in an aquarium were seen to bury themselves using their third maxillipeds and posterior two pairs of pereopods and to move under sand; they hardly appeared on the surface even at night. As well as the report on *A. dentata* (COUTURE, 1969), this observation supports ZARENKOV's (1965) view that the flattened dactyli of the posterior two pairs of pereopods was adaptation enabling the shrimp to bury itself, though some earlier authors (e.g., SCHMITT, 1921; RATHBUN, 1929) considered that the specialized dactyli were adaptations for swimming as in the portunid crabs.

Discussion

As pointed out by the original author, *Argis hozawai* closely resembles *A.*

lar. According to him, however, *A. hozawai* differs from *A. lar* in the following five features: "1) on the median carina of the carapace, there is a distinct tubercle besides two pointed teeth, and it is laterally compressed and is situated in front of the anterior median tooth; 2) of these two medial teeth, the anterior one is at the anterior third of the carapace, and at a point a little behind the half way mark from this tooth of the posterior carapace margin there is the other tooth; 3) the median carinae of the abdominal somites are high and are more strongly compressed and are acuter; 4) paired carinae of the sixth abdominal somite are distinctly extended to the posterior margin of the somite; 5) the chela of the first leg is three and two-thirds times as wide as long." We could compare directly the present material with many specimens of *A. lar* including those from the Bering Sea, the type locality (OWEN, 1839; SQUIRES, 1964). Of these five features, the second and fourth were proved to be not reliable, because any significant differences are not found between these two species. The third feature is reliable only in comparison between females of the two species, since the median carinae on the abdomen in male *A. lar* are as strong as those in *A. hozawai*. For the other features, the present examination supports YOKOYA's (1939) indication. Especially, the presence of a distinct tubercle just behind the rostrum, which is sometimes sharply pointed (KIM, 1977), is usable to distinguish *A. hozawai* from *A. lar*, even in field work. The proportion of the chela of first pereopod significantly differs on average (3.54 as long as wide in *A. hozawai* vs. 4.15 times as long in *A. lar*), though the ratios partly overlap each other (Fig. 5). In addition to the characters cited above, *A. hozawai* differs from *A. lar* in having the distolateral tooth of the scaphocerite reaching

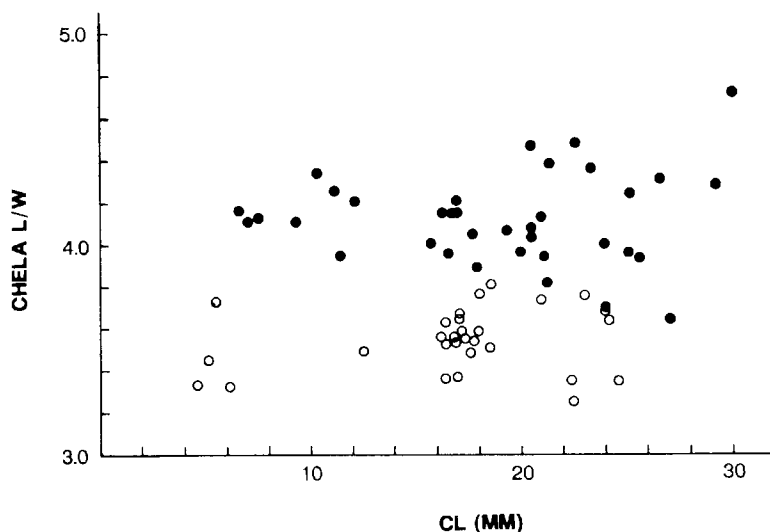


Fig. 5. Comparison of proportionate length to width of chela of 1st pereopod between *A. hozawai* (YOKOYA, 1939) (open circles, N=29) and *Argis lar* (OWEN, 1839) (solid circles, N=36).

or slightly overreaching the blade, rather than slightly falling short of it; the available material of the two species suggests that *A. hozawai* may be slightly smaller than *A. lar* in maximum size (24.6 mm CL vs. 30.0 mm CL).

Probably due to the close superficial resemblance, some carcinologists seem to have confused these two species. *A. lar* reported by RATHBUN (1904: p. 137) is possibly referable in part to *A. hozawai* since she stated that "sometimes there is a tubercle behind the rostral spine." KOBIAKOVA's (1937) *A. lar* is also referable at least in part to *A. hozawai*, since the figure given (p. 112, fig. 12) agrees well with *A. hozawai*. KIM (1977), who reasonably distinguished *A. hozawai* from *A. lar*, seems to believe that *A. lar* reported by YOSHIDA (1941) from Korea is identical with *A. hozawai*. However, YOSHIDA's *A. lar* belongs without doubt to true *A. lar*, judging from the photograph (pl. 7, fig. 3). VINOGRADOV (1950) separated a form having a tubercle in front of the anterior median spine on the carapace from typical *A. lar* as a subspecies named *Nectocrangon lar kobjakovi*. However, he did not seem to make reference to YOKOYA's (1939) work unfortunately. Later, KOBIAKOVA (1958) treated the VINOGRADOV's subspecies only as a variation of *A. lar*, though she still used the subspecific name. Further, ZARENKOV (1960) abandoned the subspecific division of *A. lar*, because he considered that VINOGRADOV's key character, i.e., the presence or absence of a tubercle behind the rostrum, has no significant taxonomic value. These two Russian authors also did not cite YOKOYA's (1939) paper. As discussed above, the two forms divided on the basis of the presence or absence of the tubercle behind the rostrum showed sufficient differences to separate them as two distinct species.

Distribution. The available material and the review of previous literature indicate that *A. hozawai* is confined to Asian waters: Pacific coast of northern Japan southward to Kinkasan (YOKOYA, 1939; present study); Sea of Okhotsk (KOBIAKOVA, 1937; 1958; VINOGRADOV, 1950), Sea of Japan southward to Korea (VINOGRADOV, 1950; KOBIAKOVA, 1958; KIM, 1977); 10–250 m (present study). On the other hand, *A. lar* is widely distributed in the northern North Pacific (BUTLER, 1980).

Acknowledgements

We express our thanks to the collectors indicated in the "material" section above for their efforts in securing specimens. We wish to express sincere gratitude to Dr. K. HAYASHI of Shimonoseki University of Fisheries and Dr. A. B. WILLIAMS of National Marine Fisheries Service, National Museum of Natural History, Smithsonian Institution for their valuable suggestions and critical reading of the manuscript. The cooperation and assistance given by the ship's personnel on board the R/V Tanshu-Maru of Kasumi High School, Hyogo Prefecture are also acknowledged.

摘 要

駒井智幸・尼岡邦夫 (北海道大学水産学部水産動物学講座) — 北日本から採集されたヒメクロザコエビ (新称) *Argis hozawai* (YOKOYA, 1939) の再記載。

宮城県金華山から北海道東部羅臼にかけての北日本太平洋沿岸から採集された標本に基づきヒメクロザコエビ(新称) *Argis hozawai* (YOKOYA, 1939) を再記載した。本種は原記載(宮城県尾崎沖)以外では韓国の沿岸から記録されているのみであった。形態的にはクロザコエビ *A. lar* (OWEN, 1839) に酷似するが、額角の直後に明瞭な結節状突起があること、第1および第2腹節上の正中隆起が明瞭であること、第1胸脚のはさみの掌部が比較的太いこと、および体がやや小型であることなどの点で識別される。さらに、以上の特徴に基づいてシノニムの整理を行った結果、クロザコエビに関する文献のいくつかが兩種を混同していることが示唆された。また、VINOGRADOV (1950) によって提唱された *Nectocrangon lar kobjakovi* は、その後の研究者によりクロザコエビのシノニムとされたが(KOBIJAKOVA, 1958; ZARENKOV, 1960)、本研究では、額角の後方に結節状突起を持つという点から本種のシノニムと判断した。関係文献を検討した結果、クロザコエビは北極圏を含む北部北太平洋に広く分布するが、本種の分布は北太平洋西部に限定されていることが示唆された。

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