

On the sharp-nosed crab *Scyra compressipes* Stimpson, 1857 (Brachyura: Epialtidae: Pisinae) from the southern Kuril Islands

О крабе *Scyra compressipes* Stimpson, 1857 (Brachyura: Epialtidae: Pisinae) с южных Курильских островов

Ivan N. Marin¹, Vassily A. Spiridonov², Sergey E. Anosov³
И.Н. Марин¹, В.А. Спиридонов², С.Е. Аносов³

¹ A.N. Severtsov Institute of Ecology and Evolution of RAS, Leninsky prosp., 33, Moscow, 119071, Russia.
E-mails: coralliodecapoda@mail.ru, vanomarin@yahoo.com

² (†) P. Shirshov Institute of Oceanology, Russian Academy of Sciences, Nakhimovsky prosp., 36, Moscow, 117997, Russia.

³ Russian Federal Research Institute of Fishery and Oceanography, Verkh. Krasnoselskaya st., 17, Moscow, 107140, Russia.
E-mails: anosov@vniro.ru, anosov@aquarius-s.ru

¹ Институт проблем экологии и эволюции РАН, Ленинский проспект 33, Москва 119071, Россия

² (†) Институт океанологии РАН им. П.П. Ширшова РАН, Нахимовский проспект, 36, Москва, 117997, Россия

³ Всероссийский научно-исследовательский институт рыбного хозяйства и океанографии (ВНИРО), Верх. Красносельская ул., 17, Москва, 107140, Россия.

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КЛЮЧЕВЫЕ СЛОВА. Crustacea, Decapoda, Epialtidae, *Scyra*, новая находка, фауна, разнообразие, Хабомаи, южные Курилы, Северная Пацифика, Россия.

ABSTRACT. The sharp-nosed crab *Scyra compressipes* Stimpson, 1857 (Brachyura: Epialtidae: Pisinae) is collected in coastal waters of the Habomai Islands (the southern Kuril Islands) at the depth of 18–24 meters. The species was recorded in the Russian waters for the first time in 1958, but since no other records were published. The photos of alive specimens are presented for the first time. The article discusses the morphological differences from closely related species co-living on the southern Kuril Islands.

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РЕЗЮМЕ. Краба-декоратор *Scyra compressipes* Stimpson, 1857 (Brachyura: Epialtidae: Pisinae) впервые отмечен на глубине 18–24 м у берегов архипелага Хабомаи (южные Курильские острова). Вид впервые был отмечен в российских водах в 1958 г., но с тех пор сообщения о находках более не публиковались. Фотографии живых особей представлены впервые. В статье обсуждаются отличия от близкородственных видов, также обитающих на южных Курильских островах.

Introduction

The fauna of decapod crustaceans of the Far Eastern Seas is relatively well studied and presently in-

cludes 35 brachyuran species [Vinogradov, 1950; Marin, 2013a, c; Spiridonov *et al.*, in prep.] with the most diverse area of the Sea of Japan, the southern Kuril Islands and the southern coast of Sakhalin where the northern border of their distribution is located. During last decade, several species and even genera of the decapod crustaceans new for the Far Eastern Seas are discovered. Several species were recently recorded for Russian coasts of the Sea of Japan [Marin, 2013a–c, 2016, 2017; Marin *et al.*, 2011, 2018; Komai, 2015; Matsuzaki *et al.*, 2015; Ohtsuchi, Kawamura, 2019; Marin, Antokhina, 2020], Sea of Okhotsk [Marin, 2014, 2020a, b; Hibino *et al.*, 2015; Komai, Matsuzaki, 2016; Komai, Hibino, 2019; Fujita *et al.*, 2021] and the Bering Sea [Marin *et al.*, 2015; Marin, 2020b] suggesting that the real brachyuran diversity of this area is still far to be well studied. Some taxonomic questions were also resolved during last years [Anker *et al.*, 2016; Komai *et al.*, 2016, 2017; Marin, 2016a, b, 2017b, 2018a–c; Anosov *et al.*, 2018].

In February 2016 the third author (AS) has collected several specimens of a sharp-nosed crab *Scyra compressipes* Stimpson, 1857 (Brachyura: Epialtidae: Pisinae) in the shallow waters of the Habomai Islands (southern Kuril Islands). This species was found to be rather abundant in the area (AS, pers. observ.), but it has previously been reported in a single publication [Kobjakova, 1958] only, without any photos of live specimens, or other illustrations. At the same time, the latter are useful for a comparison with other related species, which will make it easier to identify it in field or museum collections, and presented herewith.

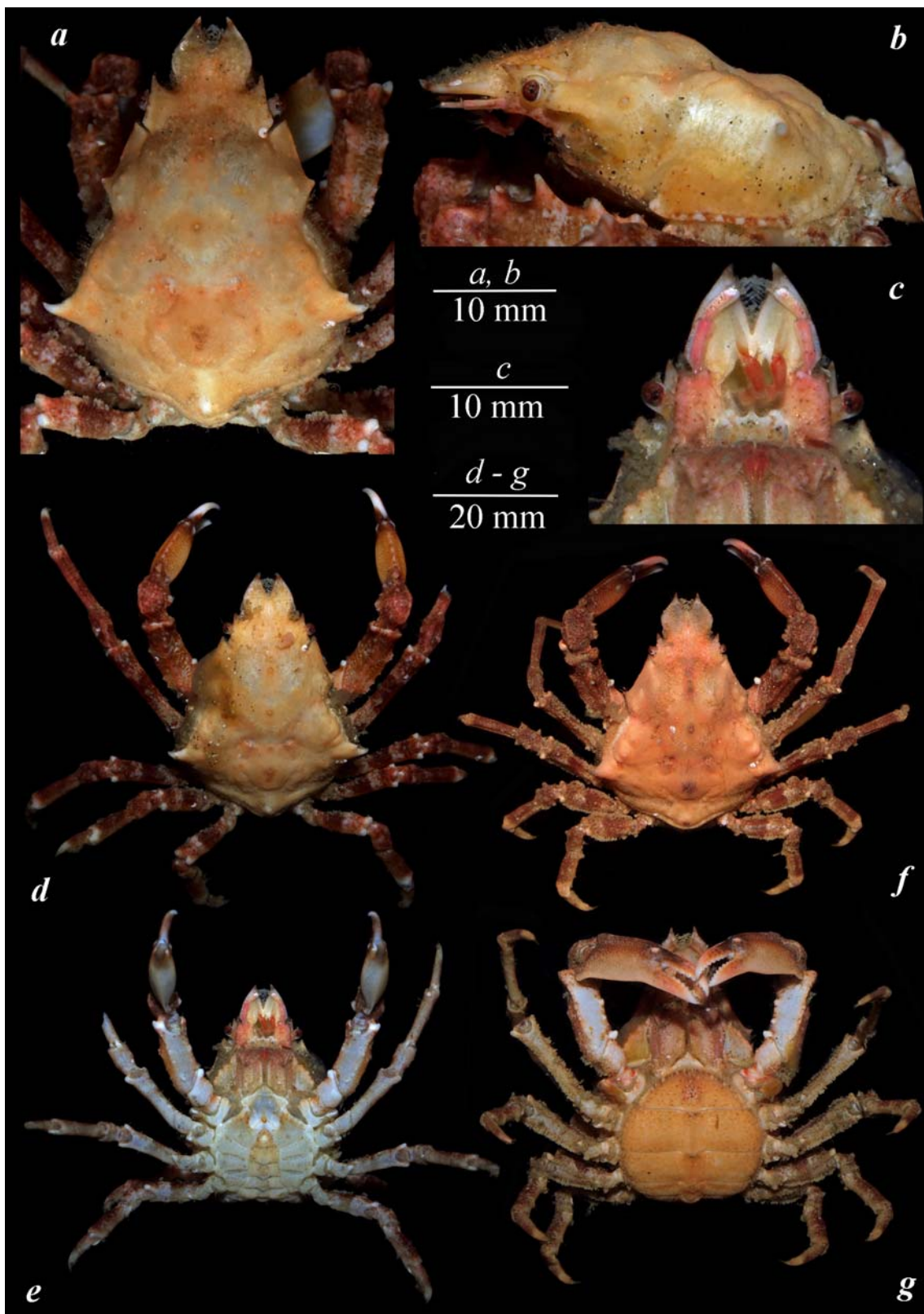


Fig. 1. *Scyra compressipes* Stimpson, 1857, ZMMU, from the Habomai Islands, ♂♂ (a-e), ♀ (f, g): a, b — carapace, dorsal; c — front of carapace and antenna, ventral; d, f — general view, dorsal; e, g — general view, ventral. Photo by S. Anosov.

Рис. 1. *Scyra compressipes* Stimpson, 1857, ZMMU, с архипелага Хабомаи, ♂♂ (a-e), ♀ (f, g): a, b — карапакс, сверху; c — передняя часть карапакса и антенны, снизу; d-e — общий вид, сверху; e, g — общий вид, снизу. Фото: С. Аносов.

Material and methods

The material was collected during a fishing survey on the fishing vessel “Olkhovatka” using SCUBA equipment at rocky bottom and between boulders covered with *Laminaria* and hydroids at a depth of 18–24 meters (water temperature was $-1...-0$ °C). Collected specimens were photographed alive and then fixed with 70% solution of ethanol. The specimens are deposited at the collection of Zoological Museum of Moscow State University (ZMMU). Carapace length (cl., in mm), the distance from tip of rostrum to postero-dorsal margin of carapace, and carapace width (cw., in mm), the distance between lateral margins of carapace in its widest part, are used as standard measurements. Only primary synonyms are given.

Taxonomy

Family Epialtidae MacLeay, 1838
 Genus *Scyra* Dana, 1851
Scyra compressipes Stimpson, 1857
 Fig. 1.

Scyra compressipes Stimpson, 1857: 218 [type locality: Hakodate Bay, Hokkaido, Japan].

MATERIAL EXAMINED. 2 mature ♂♂ and 1 ovigerous ♀ (ZMMU) – Northern Pacific Ocean, the Habomai Islands, 43°28'N 146°10'W – 43°21'N 145°56'W, 18–24 m, coll. S. Anosov, 10 February 2014.

BRIEF DIAGNOSIS (Fig. 1). Morphology of the examined specimens is identical to the original description [Stimpson, 1957] and subsequent re-descriptions [Sakai, 1976]. Carapace pear-shaped, triangular in outline regions, with well-defined regions; gastric region armed with two or three tubercles in the median line and one on median gastric region; cardiac region convex, mounted with an obtuse tubercle; hepatic region continuous with the postocular cup, having a sharp medium tooth near the posterior end; branchial region with an oblique row of three tubercles along lateral border, middle spine large; epibranchial spine prominent, forwardly pointed, placed at the junction of anterolateral and postero-lateral borders. Supraorbital cave developed; preorbital spine small, projecting anteriorly; antorbital lobe projecting; postorbital spine acute, inner surface cup-shaped, fused with hepatic lobe. The supraocular eaves thin, armed with tapering preocular spine, with narrow upper orbital sinus; pterygostomial region with ridge bearing several tubercles; infraorbital lobe rudimental. Rostrum with rostral spines flattened, laminiiform, with convex outer border, covered with hooked setae, approximately 0.2 of carapace length. Abdomen of both sexes composes of six somites. Antennula with basal segment not truncate, short, slender, armed with large distal tooth on outer margin. Chelipeds large and stout in both sexes, slightly longer than ambulatory pereopods, smooth; each merus prismatic, upper surface crested with two spines, inner surface crested; each carpus with indistinct ridges on upper surface, crested on inner margin; each palm is smooth and laterally compressed, upper and lower edges being sharply cristate; fingers of both sexes not gaping and armed with numerous small triangular teeth. Ambulatory legs slender, prismatic; with segments fringed with small plumose setae along the anterior and posterior borders. Male gonopod I stout, straight; tip triangular, with a broad lateral and two slender medial lobes.

MEASUREMENTS. Females larger than males. The largest collected ♀ has cl. 33.0 mm, cw. 29.0 mm; the largest collected ♂ has cl. 31 mm, cw. 27 mm.

DISTRIBUTION. The species is known from the southern Kuril Islands [Kobjakova, 1958], northern islands of Japan (Hokkaido (type locality), northeastern and northwestern coasts of Honshu) [Stimpson, 1857; Sakai, 1976; Komai *et al.*, 1992; Takeda, Miyauchi, 1992], eastern coast of Korean Peninsula [Kim, 1973] and once was recorded from the Yellow Sea (doubtful) [Takeda, Miyake, 1972]. Depth ranges from 10 to 160 meters [Takeda, Miyake, 1972; Sakai, 1976; Komai *et al.*, 1992; Takeda, Miyauchi, 1992].

REMARKS. The spider crab genus *Scyra* Dana, 1851 recently comprises only three species [WoRMS, 2022]. The type species of the genus, *Scyra acutifrons* Dana, 1851, is known from the west coast of North America, while two other species of the genus are known from Japan and adjacent area. Sharpnose crab *Scyra acutifrons* Yokoya, 1933 is a rare and poorly described species known only from two localities around Kyushu Island (Koshiki and Kagoshima) [Yokoya, 1933]. However, Sakai [1976] suggested, but without any discussion, that *S. tuberculata* may be a junior synonym of *Laubierinia nodosa* (Rathbun, 1916) [Griffin, Tranter, 1986]. *Scyra tuberculata* can be easily separated from *S. acutifrons* by not dilated spines of pseudorostrum, not dilated on outer border, rounded angles of hepatic region of carapace and unarmed basal segment of antenna [Yokoya, 1933; Griffin, Tranter, 1986].

From related and similar long-nosed crab species co-occurring the southern Kuril Islands (e.g., *Pugettia quadridens* (De Haan, 1839) or *Pugettia ferox* Ohtsuchi et Kawamura, 2019 (Epialtidae: Epialtinae) or *Oregona gracilis* Dana, 1851 (Oregoniidae) (see Fig. 2)), the representative of the genus *Scyra*, and *S. compressus*, can be easily separated by triangular pear-shaped carapace with rostral flattened laminiiform spines (see Fig. 2).

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Compliance with ethical standards

Conflict of interest: The authors declare that they have no conflict of interest.

Ethical approval: No ethical issues were raised during our research.

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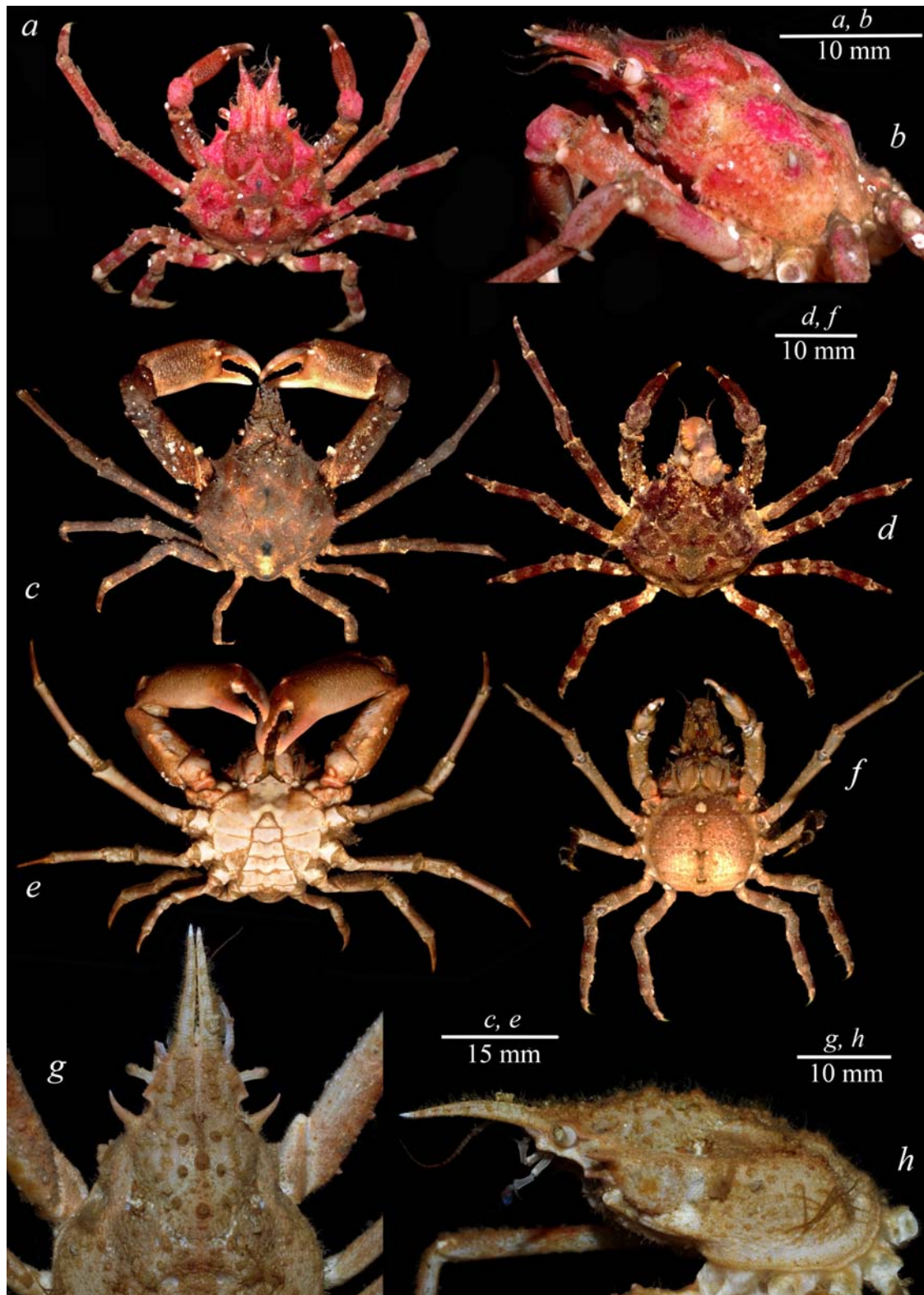


Fig. 2 *Pugettia quadridens* (De Haan, 1839) (Epiplatidae) (a–f) and *Oregonia gracilis* Dana, 1851 (Oregoniidae) (g, h) from the southern Kuril Islands, ♀♀ (a, b, d, f) and ♂♂ (c, e, g, h): a, c, d — general view, dorsal; e, f — general view, ventral; b, h — front of carapace, lateral; g — front of carapace, dorsal. Photo by S. Anosov.

Рис. 2. *Pugettia quadridens* (De Haan, 1839) (Epiplatidae) (a–f) и *Oregonia gracilis* Dana, 1851 (Oregoniidae) (g, h) с южных Курильских островов, ♀♀ (a, b, d, f) и ♂♂ (c, e, g, h): a, c, d — общий вид, дорсально; e, f — общий вид, снизу; b, h — передняя часть карапакса, сбоку; g — передняя часть карапакса, сверху. Фото: С. Аносов.

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