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A NEW SPECIES OF *CTERISSA* (ISOPODA: CYMOTHOIDAE)  
PARASITIC ON CORAL REEF FISHES FROM THE RYUKYU  
ISLANDS OF JAPAN<sup>1</sup>

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**Abstract.** *Cterissa sakaii* n. sp. is described from togari-ebisu, *Sargocentron spiniferum* (Forsskal), collected at Kuroshima and Iriomote Islands. It is distinguished by a long pleotelson, pleonite 5 which lacks a medial projection, antennae 2 10-11-merous, and triangular and deeply immersed head. The relative lengths of the endopods and exopods of the uropods change from one side to the other of this highly asymmetrical isopod.

Members of the genus *Cterissa* (Crustacea: Isopoda: Cymothoidae) have not been reported in Japanese waters, and have not been noted from subtropical regions. We collected isopods in this genus from fishes netted in small-boat, indigenous, fisheries on Kuroshima and Iriomote Islands, Ryukyu Islands, Japan. These isopods did not belong to any known species of *Cterissa*.

MATERIALS AND METHODS

Fishes were collected by commercial fishermen and examined for isopods from holding containers in ice. Hosts were measured for standard, and total length to the nearest mm. Isopods were measured for total length and maximum width to the nearest 0.1 mm and preserved in 70% ethanol. Mouthparts and appendages were mounted in glycerine jelly and drawn with the aid of a Nikon projection microscope. Whole specimens were drawn with a Nikon SMZ-10 stereo microscope and built-in camera lucida. The photograph was taken with a Nikon F2 camera, and 55 mm macro-lens. Measurements are given in mm, means in parenthesis. Common and scientific names of the hosts follow Masuda *et al.* (1984). Isopod specimens are deposited in the National Museum of Natural History, Smithsonian Institution, Washington, D.C. (USNM).

*Cterissa sakaii* n. sp.

(Figs. 1-27)

Specimens deposited: Eight total. Two females, 2 males, and 2 juveniles, 21 November 1985, Kuroshima Island, Yaeyama Islands, Japan; 1 female and 1 male, Ohara, Iriomote Island, Yaeyama Islands, Japan, 24°16.7' N, 123°52.8' E.

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Fig. 1. Female (28.1 mm) and male (13.0 mm) paratypes of *Cterissa sakaii* n. sp. in the gill chamber of togari-ebisu, *Sargocentron spiniferum* (Forsskål), from Kuroshima.

Type specimens: Holotype (female), USNM 231079; allotype (associated male), USNM 231080; 6 paratypes, USNM 231081-231082.

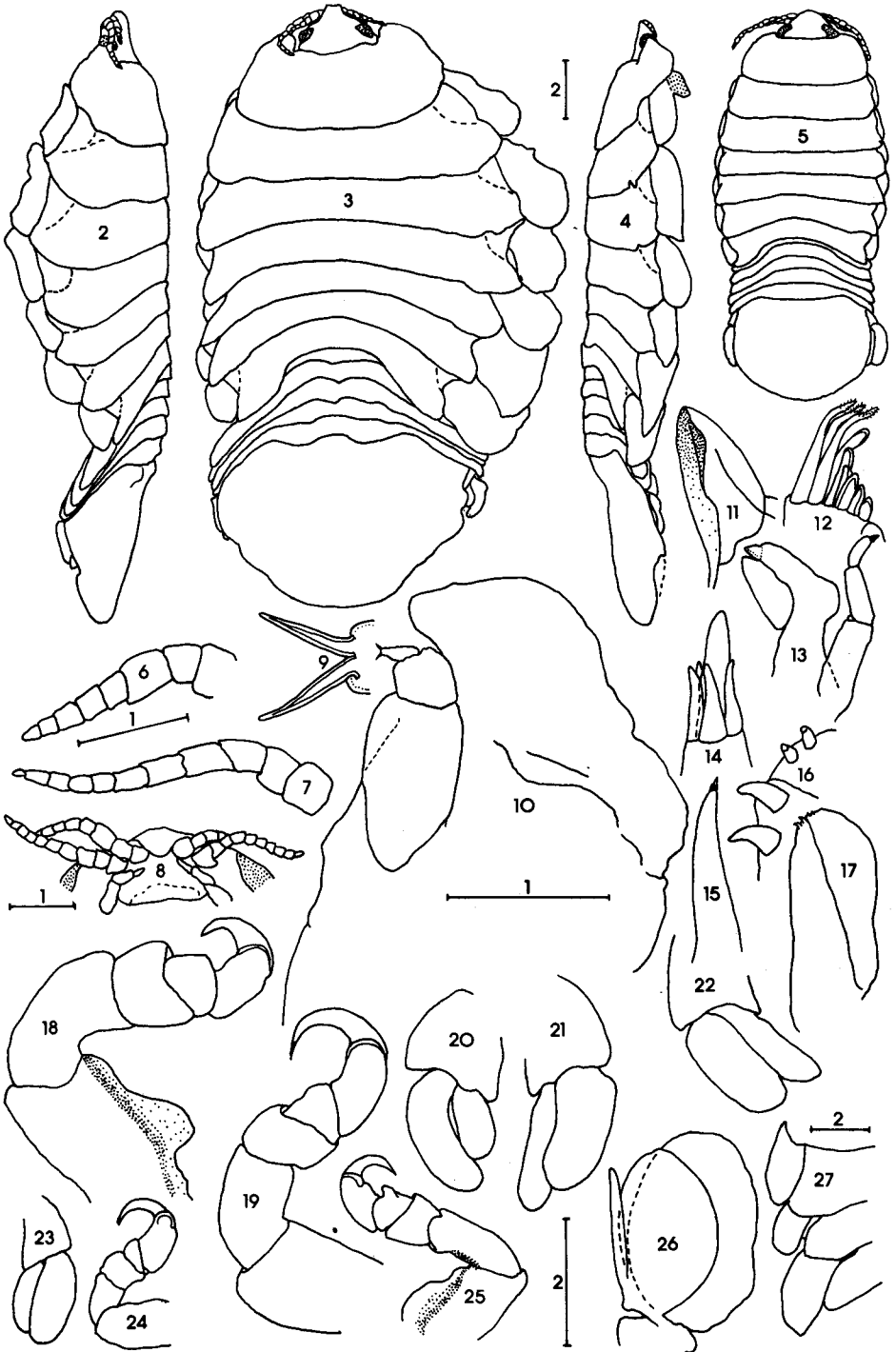
Type locality: Kuroshima Island, Yaeyama Islands, Okinawa Prefecture, Japan, 24°14.9' N, 124°00.1' E.

Type host: Togari-ebisu, *Sargocentron spiniferum* (Forsskål), (Beryciformes; Holocentridae)

Site of infection: Female occurs in the ventral part of the gill chamber between the third and fourth gill arches. Male beneath female (Fig. 1).

Description: Body dorsoventrally flattened, expanded and more flattened on one side. Anterior margin of head ventrally flexed, produced into a lobe between bases of antennae 1. Antennae 1 8-merous. Antennae 2 longer and thicker than

Figs. 2-27. *Cterissa sakaii* n. sp. from togari-ebisu, *Sargocentron spiniferum* (Forsskål) collected from Kuroshima. 2-4 and 8, Female holotype (26.5 mm) with oostegites. 2, Lateral view of non-flattened side. 3, Dorsal view. 4, Lateral view of flattened side. 5, Male allotype (13.4 mm), dorsal view. 6-7, 9-22 and 27, Female paratype (28.1 mm) with oostegites. 6, Antennae 1. 7, Antennae 2. 8, Head, ventral view (holotype). 9, Apex of maxillipedal palp. 10, Maxilliped. 11, Incisor process of mandible. 12, Apex of distal segment of mandibular palp. 13, Mandible and palp. 14, Apex of maxilla 1. 15, Maxilla 1. 16, Distal lobes of maxilla 2. 17, Maxilla 2. 18, Pereopod 7. 19, Pereopod 1. 20-22, Uropods. 23-26, Male paratype. 23, Uropod. 24, Pereopod 1. 25, Pereopod 7. 26, Pleopod 2. 27, Dorsal view of reduced coxae on pereonite 5 (female paratype). (Scale bars in mm; scale of 2-5, 27 equal; scale of 10, 13, 15, 17, 18-26 equal; 9, 11, 12, 14, 16 enlargements of associated mouthpart figures).



antennae 1, 10-11-merous. Terminal segment of mandibular palp with 3 large and 6 small setae. Incisor process of mandible with pointed tip. Maxilla 1 with 1 large and 4 small apical spines. Distal lobes of maxilla 2 each with 2 spines, spines of inner lobe larger than those of outer lobe. Distal segment of maxillipedal palp with 2 long apical spines. Posteroventral angles of pereonites 4-7 on flattened side and of pereonite 7 on non-flattened side slightly produced. Anterior 1, 2, or 3 pleonites overlapped laterally by pereonite 7. Pleotelson 1.32-1.64 times wider than long. Pereopods robust, subequal, 4-7 with lobate swelling of ventral portion of basis. Pleopods without folds, or lamellar or digitiform accessory gills. Uropods short not reaching even halfway to posterior margin of pleotelson, endopod and exopod relative lengths variable (Fig. 20-22). Color of body and appendages uniformly white.

Juvenile (attached) (measured from 1 specimen): Length 6.85, maximum width 2.85 (second specimen was too damaged to measure— molting between pereonites 4 and 5). Seven pairs of pereopods present, no serration on inside of dactyls. No appendix masculina and no penes lobes present. Setae on ends of uropods and pleotelson. Pigment spots scattered on head, lateral sides, and pleon.

Male (measured from 3 specimens): Length 13.0 to 13.4 (13.1), maximum width 5.5 to 5.9 (5.7). Penes lobes large, extending to or onto bases of pleopod 1. Appendix masculinum of pleopod 2 linear, with unmodified apex, approximately 2/3 length of endopod. Pleonite 1 as wide as remaining pleonites.

Female (measured from 3 specimens): Length 26.5 to 29.8 (28.1), maximum width 15.2 to 16.3 (15.6). Pleonite 1 less wide than remaining pleonites. Pleotelson covers peduncles of uropods.

Brood pouch reproduction: Specimens were not examined to avoid damaging the few (N=3) female specimens available.

The specific name is in honor of Mr. Kazuhiko Sakai who greatly aided our research in Japan.

Japanese standard common name: Sakai-yadori-mushi (shin-sho) = Sakai's isopod.

Remarks: *Cterissa sakaii* n. sp. most closely resembles *C. pterygota* (Koelbel, 1879), which occurs on a closely related host, sumitsuki-kanoko, *Sargocentron cornutum* (Bleeker), in Amboina (Koelbel, 1879) and Sumatra (Trilles, 1979). It differs from *C. pterygota* by having a much longer telson [29% (28.2%-30.3%) of the body length, instead of 19%], a pleonite 5 which lacks a medial posterior projection, an antennae 2 with 10-11 instead of 12 segments, a triangular instead of a round head, and a head which is more immersed (anterolateral angles of pereonite 1 extend from middle of eyes to beyond anterior margin of eyes, instead of not extending to eyes or to posterior margin of eyes).

Three of the six specimens of *Sargocentron spiniferum*, 246-260 (253) in standard length, examined from the Yaeyama Islands were infected with *Cterissa sakaii*. Twelve specimens from Okinawa Island (not measured but all larger than the Yaeyama specimens) were not infected.

Variability: In 2 female specimens of *C. sakaii* the exopods were longer than the endopods of the uropod on the flattened, extended, side of the body (Fig. 20); and the endopods were longer than the exopods on the other side (Fig. 21). In one female specimen the rami were approximately equal on both sides (Fig. 22). The coxa of pereonite 5 on the expanded flattened side of one female was reduced (Fig. 27).

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