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## *NYMPHON STIPULUM*, A NEW PYCNOGONID SPECIES FROM SOUTHERN CALIFORNIA

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### ABSTRACT

A new species of pycnogonid, *Nymphon stipulum*, from off the Channel Islands, southern California, in 395 meters, is described and figured. Previous literature on southern California pycnogonids is outlined and the relationships of the new species with other southern California *Nymphon* species is discussed.

### INTRODUCTION

This new pycnogonid species was found among specimens collected over many years by personnel of the Allan Hancock Foundation of the University of Southern California aboard their research vessels *Velero III* and *Velero IV* in the Eastern Pacific. It was loaned to me by the Foundation several years ago and I regret that I have had to delay the publication of its description for so long.

The pycnogonids of the coasts of North America and in particular those of the West coast, are poorly known and in need of current reexamination and in some cases of redescription. The first extensive paper treating this fauna was that of Cole (1904), followed by those of Hall (1912, 1913: see Child, 1987, for clarification of Hall's types), and by a long series of mostly preliminary and totally inadequate papers of Hilton, whose types and other specimens are being described and figured by

Child (1975). The inadequacy of Hilton's descriptions and his few poor figures have prevented most specialists from knowing the nature and extent of the diversity of American west coast pycnogonid fauna. Hedgpeth (1939, 1940, 1941a, 1941b, 1951) has extended our knowledge of California pycnogonids and attempted to study Hilton's work while not having access to most of Hilton's material. Very few other specialists have studied the pycnogonids of west coast North America, although several other authors have published one or two new species from time to time (Scott, 1912, Exline, 1936). The diversity of west coast pycnogonids will not be adequately known until the remainder of Hilton's species from that area are fully described and figured in accordance with current conventions, and those of several other authors are refigured for clarification. Meanwhile, the known fauna is expanded by the addition of this *Nymphon* species from southern California.

## SYSTEMATICS

Family Nymphonidae Wilson

Genus *Nymphon* Fabricius, 1794

*Nymphon stipulum*, new species (Fig. 1)

*Material examined:* Southern California, off Santa Rosa Island, 395 meters, box corer, coll. *Velero IV*, sta. 23133, 1975, 1 female, holotype (A. Hancock Foundation collections, Los Angeles County Museum, California).

*Description:* Size moderately small; leg span about 18 mm. Trunk fully segmented, neck very short, without parallel sides, lateral processes widely spaced by at least twice their diameters, each about twice as long as its maximum diameter, armed with few tiny distal setae. Ovipiger implantation anterior to and well separate from first lateral processes. Ocular tubercle large, about as tall as basal diameter, placed anterior to ovipiger implantation tubercles and just posterior to neck widening at crop, apex rounded, with pair of tiny lateral tubercles as sensory papillae. Eyes very large, slightly pigmented, anterior pair much larger than posterior pair, the four almost filling ocular tubercle.

Proboscis slender, tapering gradually from cylindrical base to narrow mouth, with pair of small ventrolateral swellings just proximal to lips. Abdomen slender, moderately short, originating from low swelling between fourth lateral processes, separated from swelling by distinct suture line, armed with four short lateral setae distally.

Chelifores long, slender, scape slightly clubbed distally, slightly curved ventrally, armed with many tiny double setules in pairs originating from single base and many short lateral and distal slender, palm slightly shorter than fingers, armed with many double setules

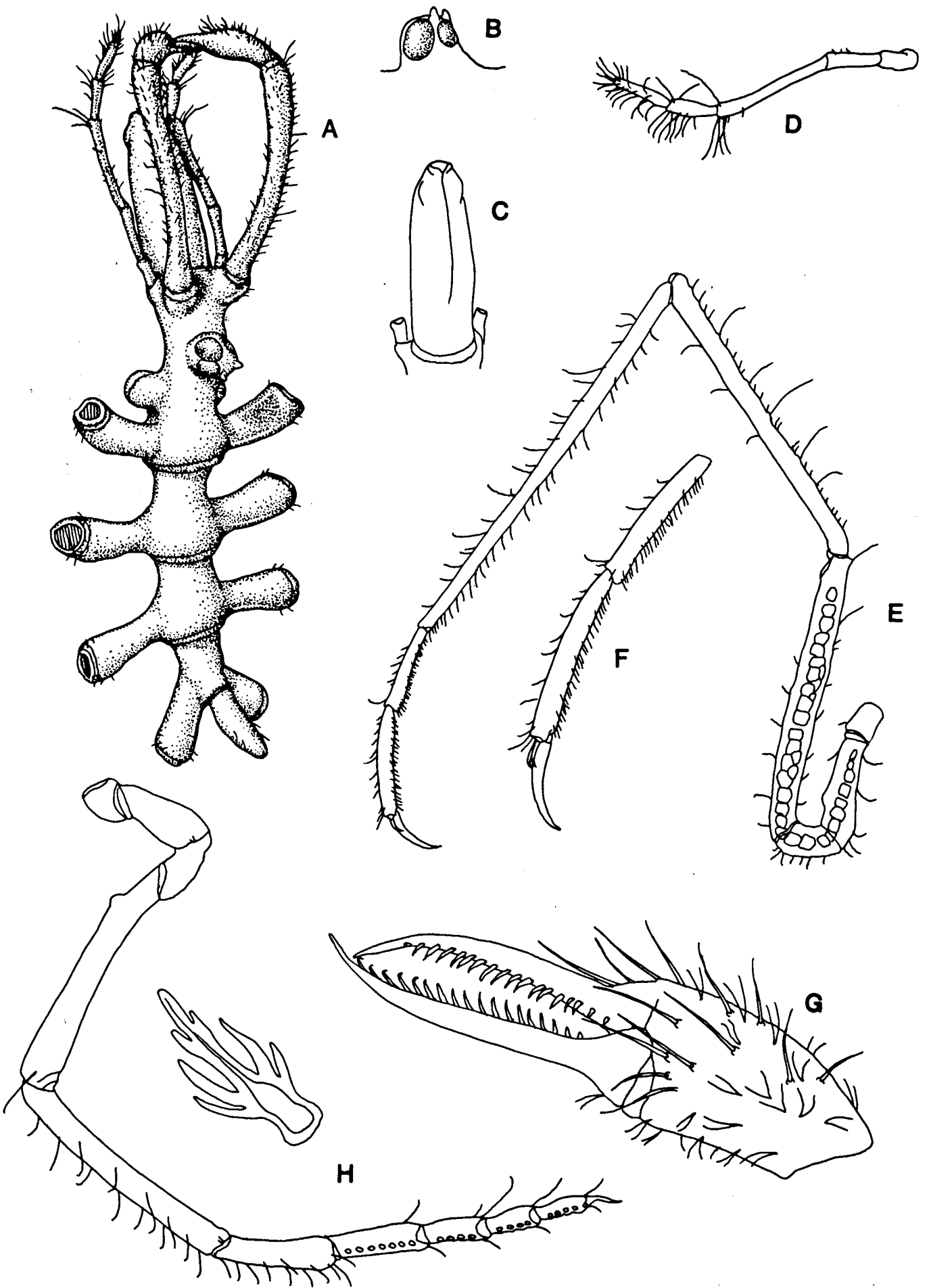
and many setae. Fingers were slender, moderately curved, overlapping at tips, armed with 16 sharp peg-like teeth on immovable finger and 18 similar teeth on movable finger, movable finger little longer than immovable finger.

Palps very slender, only lightly setose. Third segment longest, with second segment only 0.6 length of third, first segment only 0.5 length of second. Fourth segment little longer than first with fifth segment almost as long as second. Distal three segments with increasing numbers of setae on their distal ends, most setae longer than their slender segments.

Ovipigers slender, fourth and fifth segments subequal, fourth with small proximolateral bump and pair of distal setae longer than segment diameter. Fifth segment with rows of 5-6 lateral and ectal setae as long as or longer than segment diameter. Sixth segment about 0.5 length of fifth, armed with 10-11 extal setae like those of fifth segment. Strigilis segments each shorter than last, armed with 1-2 long ectal setae and a row of endal denticulate spines in the formula 7:4:4:5. Terminal claw short, only half length of terminal segment, without endal teeth or setules, well curved. Denticulate spines homogenous, with broad base having two long lateral serrations and additional small serration on slender distal portion.

Legs very slender, moderately setose. Second coxae almost three times length of first coxae, femorae only little shorter than first tibiae, coxae and femorae with few dorsal and ventral setae. First tibiae with few ventral setae, more dorsal setae with several dorsal setae up to twice as long as segment diameter. Second tibiae with many short ventral setae and fewer dorsal setae, some slightly longer than segment diameter. Tarsus and propodus slender, almost straight, tarsus about 0.9 length of propodus, both armed with many short sole setae and fewer longer dorsal setae, without major heel or sole

Fig. 1. *Nymphon stipulum*, new species, female holotype: A, Trunk, dorsal view; B, Ocular tubercle, lateral view from left side; C, Proboscis, ventral view; D, Palp; E, Third leg; F, Terminal segments of third leg, enlarged; G, Chelifore; H, Ovipiger, with denticulate spine enlarged.



spines. Claw well curved, about half propodus length, auxiliaries short, only about 0.3 length of main claw, curved only at tips. Second and third coxae and femorae filled with chain of large ova. Sexual pores ventrodiscal on all second coxae.

Male characters unknown.

*Measurements* (in mm): trunk length (proboscis insertion to tip 4th lateral processes), 1.5; trunk width (across 2nd lateral processes), 1.02; proboscis length, 0.57; abdomen length, 0.19; third leg, coxa 1, 0.25; coxa 2, 0.73; coxa 3, 0.33; femur, 1.68; tibia 1, 1.8; tibia 2, 2.36; tarsus, 0.52; propodus, 0.57; claw, 0.27.

*Distribution*: The new species is known only from the type-locality, off Santa Rosa Island, southern California, in 395 meters.

*Etymology*: The species name (Latin: *stipula*, a stalk, stem or trunk) translated into old Anglo-Saxon as *stoc* or *stock*, being a play on the name of Dr. Jan H. Stock, to whom this species is dedicated.

*Remarks*: One character of this new species is rare among the many species of *Nymphon* now known. Very few have the ocular tubercle placed so far anterior and in advance of the oviger implantation tubercles. In the majority of species, the ocular tubercle is directly dorsal to the oviger tubercles or even slightly posterior to this placement. The ocular tubercle position in this new species places it in an intermediate position between species of *Nymphon* with the ocular tubercle toward the posterior and species of *Heteronymphon* in which the ocular tubercle is always placed at the anterior of the neck and directly posterior to the chelifore insertion bulges.

This species is closely related to another southern California species, *N. heterodenticulatum* Hedgpeth (1941) from off Santa Catalina Island, another of the Channel Islands, in 146 meters. The similarities are in the denticulate spines which in both species have a broad base with paired long lateral serrations and a slender distal portion with two or three smaller serrations per side. Hedgpeth's species also has chelifores which are very similar to those of the new species with long slender fingers armed

with a similar number of sharp simple teeth. The ovigers of both species are very alike except for the strigilis which has more denticulate spines per segment and a longer terminal claw bearing endal serrations unlike that of the new species. The other differences between this new species and Hedgpeth's type (also a female) are; *N. heterodenticulatum* has a much longer tarsus in relation to the propodus, longer auxiliary claws, a much longer neck, a differently shaped proboscis without the distal taper, and a very different ocular tubercle placed much more posteriorly and having smaller eyes and a tall apical cone.

The new species has some similarities to another west coast species, *N. pixellae* Scott (1912), with the similarities found mainly in the slender legs, the long slender chelifores, and the placement and length of the lateral processes. Scott's species also has a long neck along with several other characters which disagree with those of *N. stipulum*.

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The specimen is deposited in the collections of the Los Angeles County Museum, Los Angeles, California.

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