

Some deep-sea Pycnogonida from the Argentine slope and basin

C. Allan Child

Department of Invertebrate Zoology, National Museum of Natural History,
Smithsonian Institution, Washington, D.C. 20560, U.S.A.

Abstract.—Five stations from the Argentine Slope and Basin in the South Atlantic resulted in a rich collection of thirteen pycnogonid species, the majority new to that area of the Atlantic Ocean. Ten of the thirteen species are from the family Nymphonidae and four of these are new: *Heteronymphon caecigenum*, *Nymphon centrum*, *N. dentiferum*, and *N. vacans*. Distributions are given for all species along with pertinent remarks. The new species are described, illustrated, and compared with likely congeners. One additional species, *Nymphon scotiae*, is illustrated to contribute to knowledge of its morphology where the type figures were diagrammatic and not entirely accurate.

This small collection was omitted from a previous report on deep-sea pycnogonids from the North and South Atlantic Basins (Child 1982) because it was not known to exist at that time and did not come to my attention until many years later. It consists of five additional stations made by the *Atlantis II*, of the Woods Hole Oceanographic Institution, in the South Atlantic off Argentina. None of these stations is duplicated in the previous report listed above. Seventeen species were listed in the first report from the Argentine Basin with six species and one genus described as new of the seventeen (35% new). It was noted (Child 1982: 1) that Argentine Basin fauna is poorly known.

Knowledge of the Basin's fauna is only slightly improved with the addition of the thirteen species listed in this report, four of which are described as new (31%) and four additional species recorded for the first time herein from the Argentine Basin. The new species are; *Heteronymphon caecigenum*, *Nymphon centrum*, *Nymphon dentiferum*, and *Nymphon vacans*. Known species recorded for the first time in the Argentine Basin and slopes are; *Nymphon longicollum* Hoek, *N. inferum* Child, *N. scotiae* Stock, and a questionable specimen of *Colossen-*

deis scoresbii Gordon. The other five species are either cosmopolitan deep water species or have apparently invaded this basin from nearby deeps or Subantarctic deep-seas.

Family Ammotheidae Dohrn, 1881
Genus *Cilunculus* Loman, 1908
Cilunculus acanthus Fry & Hedgpeth,
1969

Cilunculus acanthus Fry & Hedgpeth,
1969:126–127, figs. 207–209.—Stock,
1978:197 [key].—Child, 1982:9; 1994a:
34.

Material examined.—Slope E of Cabo San Antonio, Argentina, 36°55.7'S, 53°01.4'W, 2707 m, sta. 245A, epibenthic sled, 14 Mar 1971, 1 ♂ with eggs, 1 ♂, 5 ♀, 4 juv.

Distribution.—The species is apparently confined to the Scotia Sea and Argentine basin, based on what few records there are of captures. The type was collected in the Drake Passage. This capture extends the distribution of *C. acanthus* a little to the north in the Argentine Basin where it has been reported (Child 1982) and adds nothing new to a known depth range of 2450–2818 m.

Remarks.—This is a rare species, but perhaps only scarce because of the few deep-sea collections which have come from the Argentine basin. It is rare in the Scotia Sea where many more trawl samples have been made and from which many pycnogonids are known. Members of this genus are more commonly found in temperate regions.

The distinctive truncate conical cement gland tube and delicate slender dorsomedian tubercles easily identify this species among the many rather plain Subantarctic pycnogonids known from the Scotia Sea.

Family Austrodecidae Hodgson, 1907

Genus *Pantopipetta* Stock, 1963

Pantopipetta longituberculata (Turpaeva, 1955)

Pipetta longituberculata Turpaeva, 1955: 324–327, fig. 2.

Pantopipetta brevicaudata Stock, 1963: 336–338, figs. 9, 10a.—Hedgpeth & McCain, 1971:219, fig. 1E, 220, table 1, 222 [key], 223–225, figs. 3, 4, table 3.

Pantopipetta longituberculata-complex.—Stock, 1981:465–466 [text].

Pantopipetta longituberculata.—Child, 1982:49–50 [literature]; 1994b:88–89, fig. 17.

Material examined.—Basin E of Mar del Plata, Argentina, 38°16.9'S, 51°56.1'W, 4382–4402 m, sta. 242, epibenthic sled, 13 Mar 1971, 27 specimens. Slope E of Cabo San Antonio, 36°55.7'S, 53°01.4'W, 2707 m, sta. 245A, epibenthic sled, 14 Mar 1971, 30 specimens. Basin E of Valdez Peninsula, 43°33.0'S, 48°58.1'W, 5208–5223 m, sta. 247, epibenthic sled, 17 Mar 1971, 30 specimens. Basin E of Mar del Plata, 37°40.9'S, 52°19.3'W, 3906–3917 m, sta. 256, epibenthic sled, 24 Mar 1971, 16 specimens. Basin E of Cabo San Antonio, 37°13.3'S, 52°45.0'W, 3305–3317 m, sta. 259, epibenthic sled, 26 Mar 1971, 14 specimens.

Distribution.—This species is fairly common in very deep waters of the Pacific and Atlantic basins, and appears to be common

in the Argentine basin. It has been found as far south as the South Shetland Islands of the Antarctic. It has one of the broadest depth ranges of any known pycnogonid: 567–6700 m.

Family Colossendeidae Hoek, 1881

Genus *Colossendeis* Jarzynsky, 1870

Colossendeis ?scoresbii Gordon, 1932

Colossendeis scoresbii Gordon, 1932:18–21, figs. 5c, 6b, 6b', 6c, 6c', 7a, b.—Child, 1995b:90, fig. 8.

not *Colossendeis megalonyx scoresbii* Fry & Hedgpeth, 1969:18 [key], 32, 33, figs. 7, 8, 17–20, 23.

Material examined.—Basin E of Mar del Plata, Argentina, 38°16.9'S, 51°56.1'W, 4382–4402 m, sta. 242, epibenthic sled, 13 Mar 1971, 1 specimen.

Distribution.—The species is only known from a few stations generally north of the Falkland Islands in 128–303 m. This specimen extends this distribution to the northeast and into very much deeper waters.

Remarks.—This small specimen is possibly not *C. scoresbii* due to the gross depth differences in this capture and those of the type specimens and the records of Child (1995b:90). This specimen also apparently lacks eyes. They are not discernable in the rather tall ocular tubercle. The ninth palp segment is shorter than usual for *C. scoresbii*, and the tarsus and propodus are longer in relation to the long claw of the *Atlantis II* specimen. It is closer to *C. scoresbii* than to any other known species.

It has similarity to *C. angusta* Sars in the short proboscis, although *C. angusta* has a shorter proboscis in relation to trunk length. The ninth palp segment of *C. angusta* is also longer. It is as long as the terminal segment while the ninth segment of this *Atlantis II* specimen is shorter than the tenth. This specimen is possibly a new species but in light of the great variation known to most species in this large genus, this single specimen must remain as a doubtful record of

C. scoresbii until more specimens are collected from this position in the South Atlantic.

Family Nymphonidae Wilson, 1878

Genus *Heteronymphon* Gordon, 1932

Heteronymphon caecigenum, new species

Fig. 1

Material examined.—Basin E of Valdez Peninsula, Argentina, 43°33.0'S, 48°58.1'W, 5208–5223 m, sta. 247, epibenthic sled, 17 Mar 1971, 1 ♀, holotype, USNM 234719; 1 ♂, 4 ♀, 1 juv., paratypes, USNM 234720.

Distribution.—Known only from the Argentine basin, in 5208–5223 m.

Description.—Size moderately small, leg span about 22 mm. Trunk fully segmented. Trunk and lateral processes smooth, glabrous, segments fully articulated, well separated by intervals equal to their diameters or slightly greater. Lateral processes slightly longer than their diameters. Ocular tubercle and eyes lacking, but hump containing lateral sensory papillae at anterior of cephalic segment suggests a low ocular tubercle. Oviger implants large, placed just anterior to but not touching first lateral processes. Neck short, not as long as wide, moderately expanded at anterior. Proboscis typical, gradually tapering to rounded oral surface, not as long as chelifore scapes. Abdomen short, distally a truncate cone with laterodistal pair of short setae.

Chelifores slender, scapes slightly longer than proboscis, armed laterally and distally with row of short setae. Chela palm as long as fingers, armed with many short lateral and ventral setae. Fingers robust, sharply curved distally, armed with 13 short recurved teeth on movable finger and ten similar teeth on immovable finger.

Palp segments moderately short, only slightly longer than chelifore scapes, typical for genus. Second segment short, only 0.6 as long as third, the longest segment. Fourth slightly shorter than second, fifth 0.25 longer than fourth, distal three segments with few very short distal and ventral setae.

Oviger (female) fourth segment subequal to fifth, sixth about 0.6 as long as fifth, all with few short lateral setae increasing in numbers on distal segments. Strigilis distal segments increasingly shorter than those more proximal, each armed with three-four short ectal setae and short endal denticulate spines in formula 6: 5: 5: 6, with terminal claw lacking teeth, hardly longer than distal denticulate spine. Spines with four lateral lobes per side.

Legs moderately slender, with few short dorsal and ventral setae, only three-four dorsal setae longer than segment diameters. Second tibia the longest segment, with first tibia slightly longer than femur. Tarsus about 0.75 length of propodus, both slightly curved, armed with row of very short sole spines and few short dorsal setae. Claw half propodal length, robust, moderately curved, auxiliaries lacking.

Male characters: slightly smaller size, femoral cement glands not evident, oviger fifth segment almost twice length of fourth.

Measurements (holotype in mm):—Trunk length, 2.46; trunk width across 2nd lateral processes, 1.1; proboscis length, 0.83; abdomen length, 0.63; third leg, coxa 1, 0.32; coxa 2, 1.0; coxa 3, 0.41; femur, 1.78; tibia 1, 2.03; tibia 2, 2.59; tarsus, 0.83; propodus, 1.08; claw, 0.53.

Etymology.—The name (Latin, caecigenus, meaning born blind) refers to the lack of any evidence of eyes in the new species.

Remarks.—This is the third known blind species in the genus *Heteronymphon*, the first being *H. profundum* Turpaeva, 1956, and second, *H. abyssale* (Stock, 1968). The latter species was moved from the genus *Nymphon* (Turpaeva, 1970:1723) because the sensory papillae commonly associated with an ocular tubercle are situated at the extreme anterior of the cephalic segment, suggesting that an ocular tubercle would be found there had one existed in *H. abyssale*. Most members of this genus live in deep waters and have inconspicuous or not fully formed eyes which are unpigmented as befits a lack of need for eyes in those habitats.

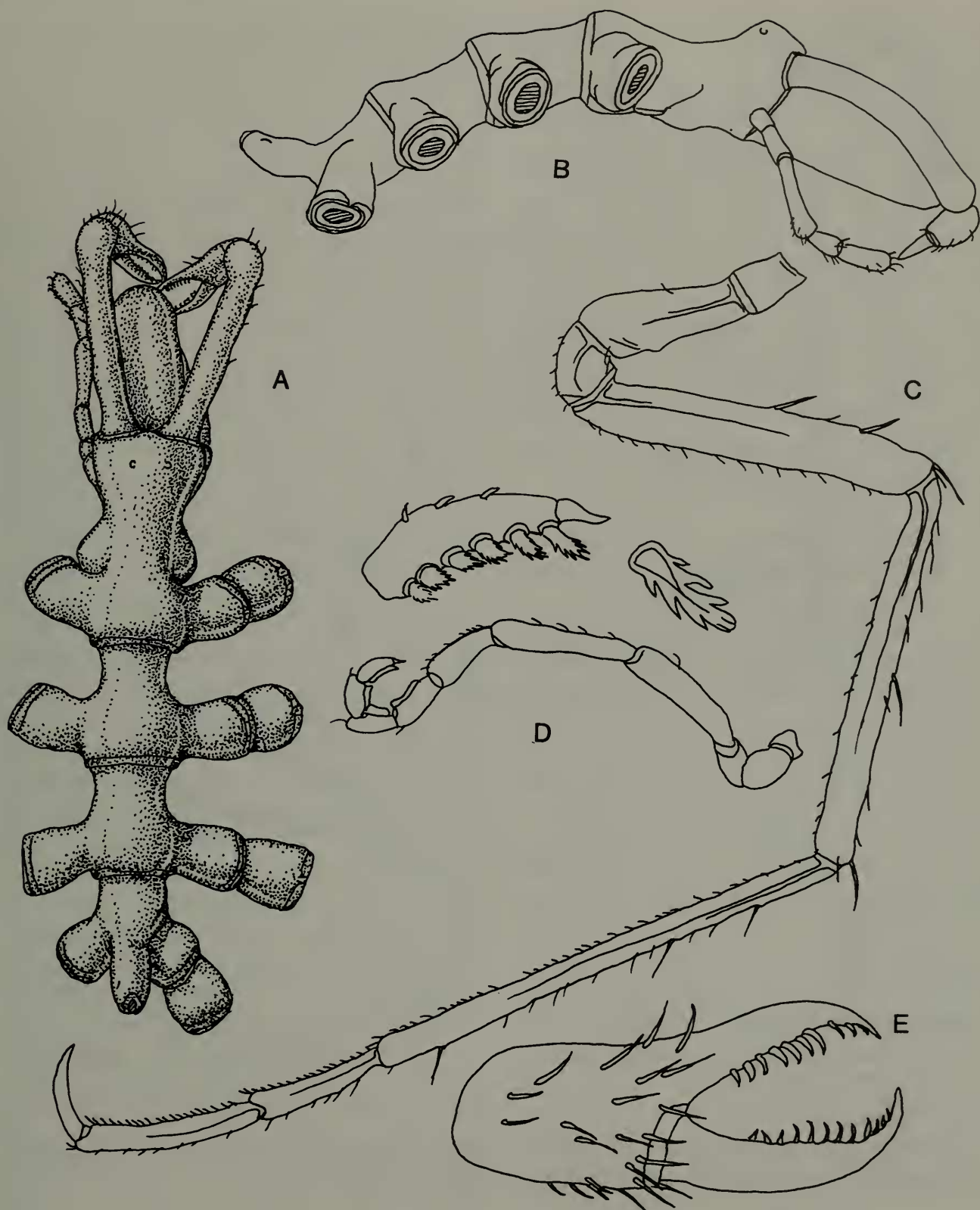


Fig. 1. *Heteronymphon caecigenum*, new species, holotype: A, Trunk, dorsal view; B, Trunk, lateral view; C, Third leg; D, Oviger, with enlargements of terminal segment and denticulate spine; E, Chela.

This new species and the two previously known have progressed to a fully blind status, going beyond the partly formed but unpigmented eyes of other species. The principal difference between this genus and the

genus *Nymphon* is the placement of the ocular tubercle and its associated sensory papillae. These are found in the extreme anterior of species in the genus *Heteronymphon* but are further posterior in species of

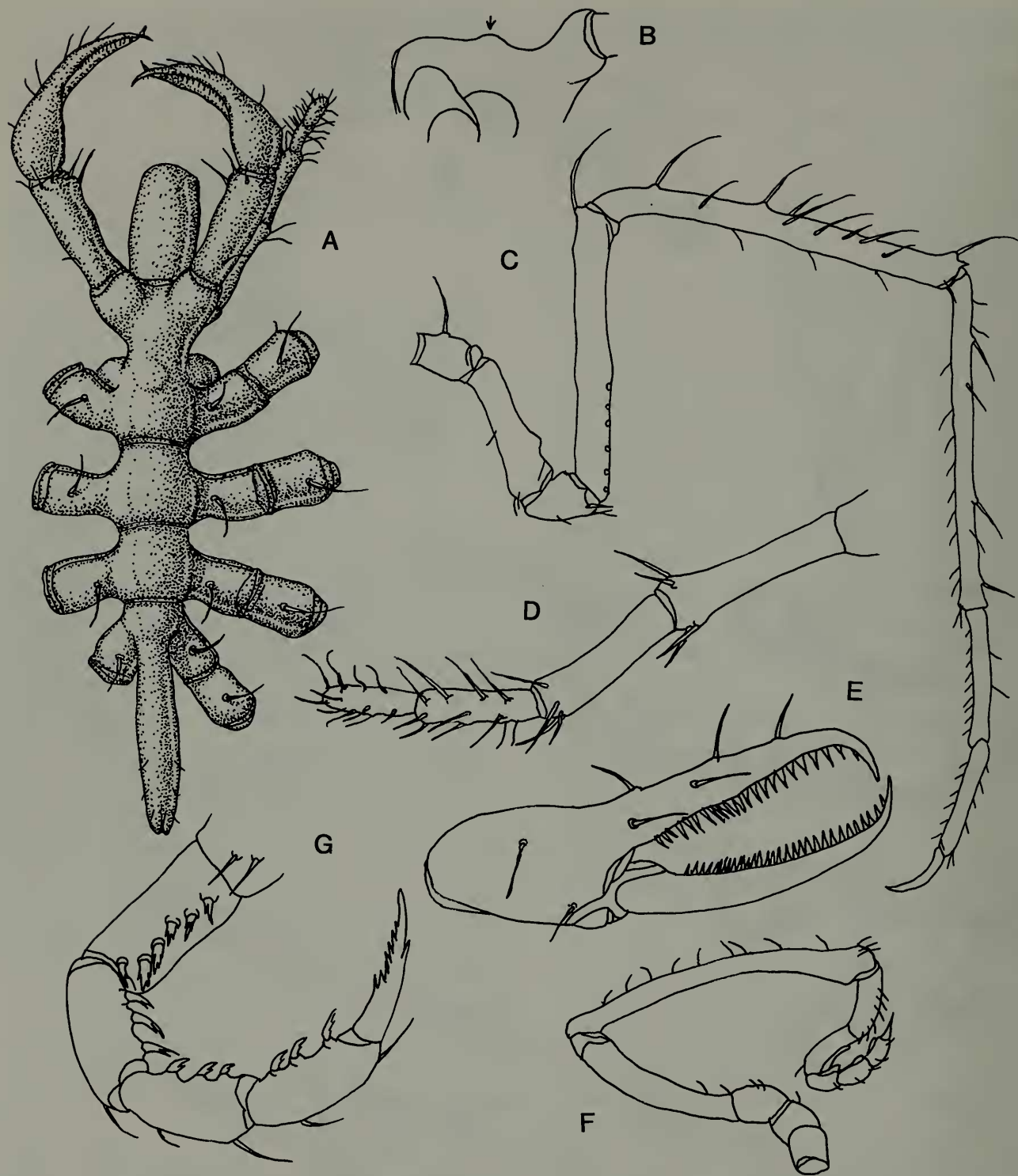


Fig. 2. *Nymphon centrum*, new species, holotype: A, Trunk, dorsal view; B, Ocular tubercle from right side; C, Third leg; D, Palp; E, Chela; F, Ovipositor; G, strigilis, enlarged.

Nymphon. Where there are no eyes and the ocular tubercle is only a morphological suggestion, the sensory papillae must exist in the location where there would be an ocular tubercle if one existed. With these three species, the papillae are anterior as in the other members of *Heteronymphon*, strong evidence that they belong in that genus.

Genus *Nymphon* Fabricius, 1794
Nymphon centrum, new species
 Fig. 2

Material examined.—Slope E of Cabo San Antonio, Argentina, 36°55.7'S, 53°01.4'W, 2707 m, sta. 245A, epibenthic sled, 14 Mar. 1971, 1 ♂ holotype, USNM

234715; 3 ♂ with eggs, 6 ♂, 7 ♀ ovig., 4 ♀, 10 Juv. paratypes, USNM 234716.

Distribution.—Known only from the type-locality in 2707 m.

Description.—Size moderately small for genus, leg span 23.5 mm. Trunk fully segmented, unadorned. Lateral processes slightly longer than their diameters, separated by intervals equal to their diameters or less, each armed with single long mediandorsal spine, spines often missing. Ovipiger attachment lobes against first lateral processes, filling most of short neck. Ocular tubercle a slight bulge only, directly dorsal to ovipiger bases, sensory papillae not evident. Proboscis short, slightly tapering distally. Abdomen very long, extending well beyond first coxae of fourth leg pair, slightly inflated medially, armed with six short dorsolateral setae.

Chelifores large with wide cylindrical scapes armed with fringe of distal setae and one proximolateral seta. Chelae only moderately curved inward, palm shorter than fingers, armed with two-three setae. Fingers strongly curved distally, overlap at tips, armed with 33 short pointed teeth on movable finger and 24 slightly larger pointed teeth and six-seven ectal setae on immovable finger. Palps moderately short. Second segment longest, with few distal setae, third segment about 0.75 length of second, with few distal setae, fourth/fifth subequal, shorter than third, armed with many scattered setae longer than segment diameters.

Ovipiger segment four well curved, longer than first three combined. Fifth almost twice length of fourth, slightly curved, armed with row of scattered ectal setae as long as segment diameter. Sixth segment short, armed with similar row of ectal setae. Strigilis segments increasingly short distally, armed with ectal setae and few denticulate spines in formula 6: 3: 3: 3:, the spines with one or two lateral lobes. Terminal claw slightly curved, longer than terminal segment, armed with seven endal teeth and one distal ectal tooth.

Legs long, slender. First coxae with long

middorsal spines matching those of the lateral processes. Second coxae longer than usual, about 2.5 times length of first and third. Femora with small dorsodistal tubercle bearing long spine. Cement glands proximoventral, with five-six tiny internal bulbs each with external pore. First tibiae the longest of major segments, armed with several dorsal and lateral tubercles bearing long spines, with few other shorter spines. Second tibiae with shorter spines only and row of short ventral setae. Tarsus slightly longer than propodus, both armed with row of short sole spines. Claw well curved, about half length of tarsus. Auxiliaries lacking.

Female characters: size slightly larger except for ovipigers in which segment four is subequal to segment five. Strigilis with few more denticulate spines.

Measurements (holotype in mm).—Trunk length, 2.64; trunk width across 2nd lateral processes, 1.46; proboscis length, 0.91; abdomen length, 1.3; third leg, coxa 1, 0.46; coxa 2, 1.03; coxa 3, 0.44; femur, 2.01; tibia 1, 2.52; tibia 2, 2.34; tarsus, 0.95; propodus, 0.82; claw, 0.46.

Etymology.—The name (Latin: centrum, a noun in apposition, meaning center or the midpoint of a circle,) refers to the large middorsal spines placed centrally on each lateral process and first coxa.

Remarks.—A member of the *N. australe*-group (Child 1995a), this new species compares with those few species of the group that are blind and uniunguiculate. It fits into the group key (Child 1995a:6–7) next to *N. compactum* Hoek, and has some similarities with *N. hampsoni* Child, also from the Argentine basin, and *N. inornatum* Child, from the Antarctic Weddell Sea. It is probably closest to *N. compactum*, but has a very different ovipiger morphology from that species. The fifth ovipiger segment of *N. compactum* is distally inflated and the sixth segment is much longer than that of this new species. The chelifore scapes of *N. compactum* are much longer and the chelae have many more teeth than in this species. *N. centrum* also has middorsal lateral pro-

cess spines which, although common in this group, are almost always in groups or only placed dorsodistally. *N. hamptoni* has similar lateral process spines, but they are in pairs and placed dorsodistally. It also has an ocular tubercle mound with conspicuous sensory papillae, longer chelifores, an oviger similar to that of *N. compactum*, and it has vestigial auxiliary claws.

This new species has a general habitus similar to that of *N. inornatum*. However, that species has an ocular tubercle almost twice as long as its diameter, palps with differing segment lengths, legs with more and longer major segment spines, and other small differences.

Nymphon dentiferum, new species

Fig. 3

Material examined.—Basin E of Mar del Plata, Argentina, 37°40.9'S, 52°19.3'W, 3906–3917 m, sta. 256, epibenthic sled, 24 Mar 1971, 1 ♀ holotype, USNM 234721; 1 ♀ ovig., 4 juveniles, paratypes, USNM 234722. Basin E of Valdez Peninsula, Argentina, 43°33.0'S, 48°58.1'W, 5208–5223 m, sta. 247, epibenthic sled, 17 Mar 1971, 15 ♀, 5 juveniles, paratypes, USNM 234723.

Distribution.—Known from its type-locality, off Mar del Plata, Argentina, in about 3900 m, the new species was also collected E of the Valdez Peninsula in about 5200 m.

Description.—Moderate sized, leg span about 48 mm. Trunk ovoid, fully segmented, lateral processes separated by about their diameters, moderately short, glabrous. Neck long in relation to most other *Nymphon* species, oviger implants halfway between first lateral processes and chelifore insertion, anterior to rounded hump representing ocular tubercle which is just anterior to first lateral processes. Sensory papillae of ocular tubercle prominent, on elevated surface, nipple-shaped. Proboscis cylindrical, very slightly inflated at tip, lips flat. Abdomen short, not extending to tip of

first coxae of fourth leg pair, armed with four short dorsodistal setae.

Chelifores large, scapes short cylinders armed with two lateral setae distally. Chelae long, slender, palms slightly longer than scapes, fingers longer than palms, well curved, overlap at tips, armed with 26 slender sharp teeth on movable finger, 17 longer curved teeth on immovable finger, and one short seta at movable finger base. Palps rather long in relation to proboscis, slender, very lightly armed with few short setae, third segment slightly longer than second, fifth about 0.25 longer than fourth, distal two segments longer in combination than third. Oviger (female) fourth segment little longer than third which has small lateral bulge proximal to midpoint. Sixth segment about 0.6 length of fifth. Strigilis segment seven slightly longer than eighth which is subequal to ninth and tenth. Denticulate spines in formula 8: 5: 5: 6. Spines very short except for one distal spine of each segment which is twice longer than those more proximal, with more lateral serrations. Terminal claw longer than terminal segment, slender, well curved, armed with ten very long sharp teeth.

Legs robust, moderately long, major segments armed with rows of slender dorsal and lateral setae, some longer than segment diameters. Second coxae distally inflated, with large prominent ventrodorsal sex pores. Femora of ovigerous female moderately swollen in proximal 0.75 of their lengths. Second tibiae longest, more slender than first tibiae or femora. Tarsus about 0.6 propodus length, both of equal diameter, slender, curved, armed with row of very short ventral spines and row of slightly longer dorsal setae. Claw long, slender, slightly curved, about 0.25 as long as tarsus.

Male characters unknown.

Measurements (holotype in mm).—Trunk length, 5.71; trunk width across 2nd lateral processes, 3.32; proboscis length, 2.46; abdomen length, 0.86; third leg, coxa 1, 0.97; coxa 2, 1.84; coxa 3, 0.96; femur,

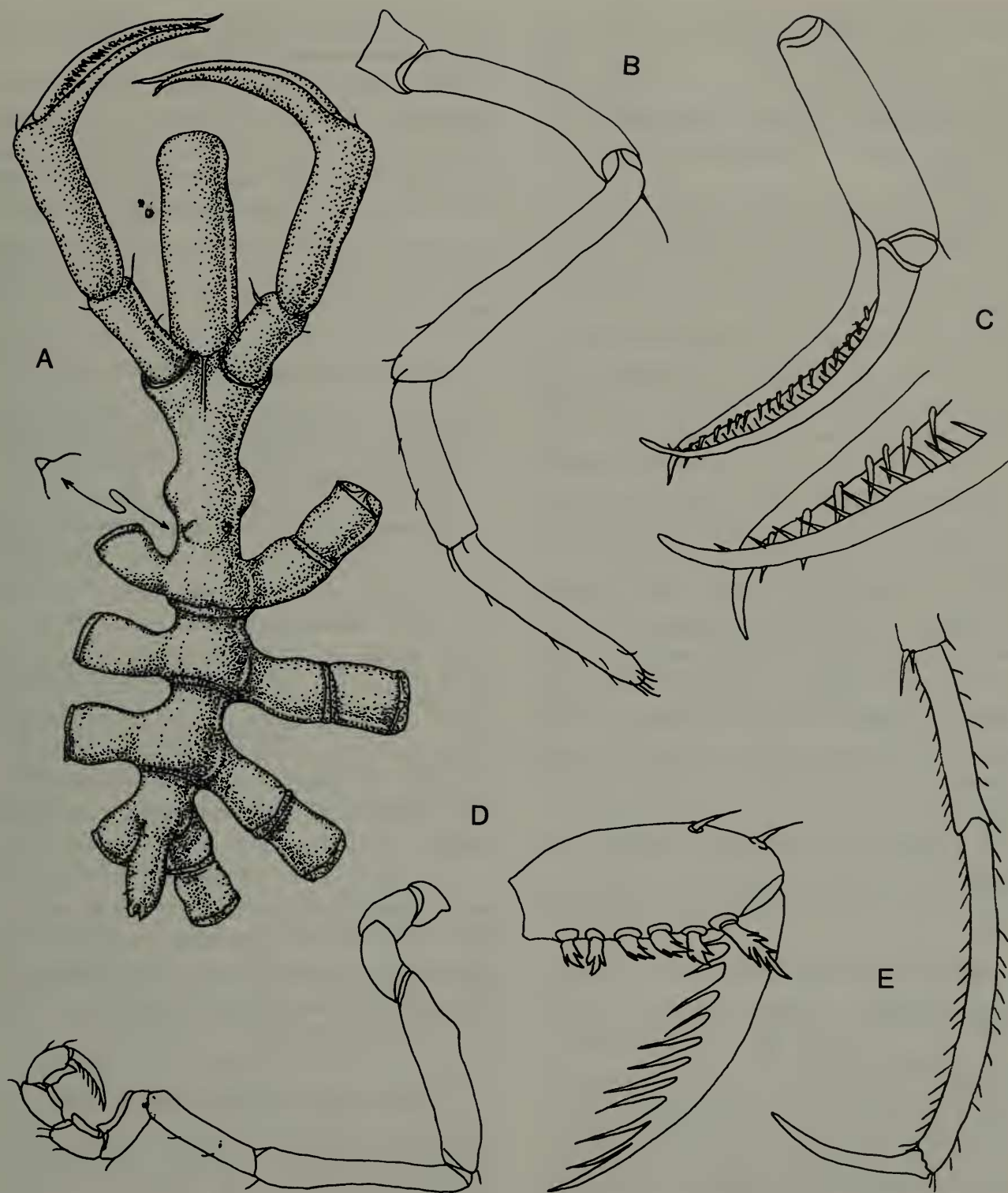


Fig. 3. *Nymphon dentiferum*, new species, holotype: A, Trunk, dorsal view, with enlargement of sensory papilla; B, Palp; C, Chela, with enlargement of finger tips; D, Oviger, with enlargement of terminal segment and claw; E, Distal leg segments, enlarged.

5.14; tibia 1, 4.5; tibia 2, 6.09; tarsus, 1.01; propodus, 1.74; claw, 0.24.

Etymology.—The name (Latin: *dentiferum*, diminutive of *dens*, a tooth or denticle) draws attention to the enlarged terminal denticulate spine on each of the four stri-

gillus segments which is an unusual character in the genus *Nymphon*.

Remarks.—The strigilis of at least one species of *Nymphon* (*N. floridanum*, in Child, 1979:33) was seen to be used as an instrument for cleaning appendages and an

enlarged distal spine might offer some advantage in this scraping function. This cleaning or scraping function was shown experimentally by Prell (1910:13, fig. 5B) with specimens of *Nymphon leptocheles* Sars, 1891.

The proboscis, trunk, and abdomen of this species are very like those of *N. hadale* Child, particularly in the neck length, placement of the oviger bulges, and the sensory papillae representing the vestigial ocular tubercle. The appendages are each quite different from *N. hadale*. The chelifore scapes of the new species are much shorter than those of *N. hadale*; and the chelae fingers of that species have many more teeth than the fingers of *N. dentiferum*. The combined length of the distal two palp segments of *N. hadale* is shorter than the third segment while the two are much longer than the third in the new species. The oviger strigilis of *N. dentiferum* has a very enlarged distal denticulate spine on each segment while those of *N. hadale* are more or less equal in size.

Nymphon inferum Child, 1995a

Nymphon inferum Child, 1995a:40–42, figs. 12A–F.

Material examined.—Slope E of Cabo San Antonio, Argentina, 36°55.7'S, 53°01.4'W, 2707 m, sta. 245A, epibenthic sled, 14 Mar 1971, 1 ♀.

Distribution.—This species was known only from Subantarctic and Antarctic waters among the island groups on both sides of the Scotia Sea. The nearest specimens to the above record are from South Georgia Island. All are deep-sea and range from 2450 to 3873 m. The Cabo San Antonio record marks a lengthy range extension to the north but adds nothing to its known depths.

Remarks.—It is not surprising to find some of the Antarctic species with ranges extending into the South Atlantic. There will probably be some which extend into the South Pacific, but deep-sea collections

from that distant region are as rare as are the species known from there.

This relatively giant species (comparable only to *N. charcoti* of Antarctica in that respect) is difficult to confuse with any other from the Scotia Sea and South Atlantic region. It is blind, uniunguiculate, and with a leg span of 160+ millimeters, its size surpasses any other *Nymphon* known among species with these characters.

Nymphon laterospinum Stock, 1963

Nymphon laterospinum Stock, 1963:322, 323, fig. 1; 1978a:211, 212, fig. 9a–d.—Child, 1982:42–43.

Material examined.—Argentine Basin E of Cabo San Antonio, 37°13.3'S, 52°45.0'W, 3305–3317 m, sta. 259, epibenthic sled, 26 Mar 1971, 25+ specimens.

Distribution.—This distinctive species is known from the North and South Atlantic basins on both sides of the Mid-Atlantic Ridge and has a wide depth range of 1894–4715 m. The above record is very near another *Atlantis II* capture in nearly the same depth.

Remarks.—The tall slender lateral process tubercles of this species along with its characters of uniunguiculate claws and blind ocular mound serve to differentiate it from all other deep water *Nymphon*, at least in the South Atlantic.

Nymphon longicollum Hoek, 1881

Nymphon longicollum Hoek, 1881:40–41, pl. 3, figs. 1–3, pl. 15, fig. 11.—Gordon, 1944:18, table 2, 19 [key].—Stock, 1965:22 [list, key].—Child, 1995a:43.

Material examined.—Argentine basin E of Mar del Plata, 38°16.9'S, 51°56.1'W, 4382–4402 m, sta. 242, epibenthic sled, 13 Mar 1971, 3 ♀, 4 Juv. Same locality, 37°40.9'S, 52°19.3'W, 3906–3917 m, sta. 256, epibenthic sled, 24 Mar 1971, 1 ♀, 1 Juv.

Distribution.—This species was known only from the Chilean basin for more than

one hundred years until many more specimens were collected in the Subantarctic islands of the South Atlantic and from the Antarctic in the Weddell and Ross Seas. It was also found on the southern New Zealand slope in 2612 m (Child 1995a:43). It is therefore known in many Southern Hemisphere localities in a wide depth range of 508–4069 m. These records extend its range to the north of the Subantarctic localities, into the Argentine basin and increase its known depth slightly to 4402 m.

Remarks.—The tall, erect, conical, blind ocular tubercle serves as a good recognition character for this species. It is conspicuous, broad based, and its shape is not found on any other known Southern Hemisphere *Nymphon*.

Nymphon longicoxa Hoek, 1881

Nymphon longicoxa Hoek, 1881:38–39, pl. 2, figs. 1–5, pl. 15, figs. 8, 9.—Child, 1995a:43–44 [literature].

Material examined.—Slope E of Cabo San Antonio, Argentina, 36°55.7'S, 53°01.4'W, 2707 m, sta. 245A, epibenthic sled, 14 Mar 1971, 2 ♀ without legs.

Distribution.—This species has been recorded from south of New Zealand to the SE Pacific, Scotia Sea, Ross Sea, and South Atlantic off Argentina. It has a known wide depth distribution of 318–3000 m.

Remarks.—A diagnosis of the species has been provided by Child (1995a:44). These specimens are without legs, but there can be little doubt in their identification. There is a small rounded ocular tubercle which may or may not have eyes. The palps are typical of the species; very slender, long, and delicate. The lateral processes are glabrous, the proboscis has the three bumps arranged radially around its distal circumference, and the oviger bases are well anterior to the first lateral processes and crowd most of the neck lateroventrally. There are very many chelae finger teeth. The tarsus and propodus are variable but usually subequal in length although it is im-

possible to tell from these legless specimens.

Nymphon scotiae Stock, 1981

Fig. 4

Nymphon stocki Turpaeva, 1974:282, fig. 1 [preoccup.:Utinomi, 1955:10].

Nymphon scotiae Stock, 1981:458 (footnote).

Material examined.—Slope E of Cabo San Antonio, Argentina, 36°55.7'S, 53°01.4'W, 2707 m, sta. 245A, epibenthic sled, 14 Mar 1971, 2 ♂ with eggs, 9 ♂, 19 ♀, 24 juveniles.

Distribution.—This species was described from two specimens collected in the Scotia Sea in 2960–2980 m. It has not been captured since until the present record in the Argentine basin. This record places it well north but near the same longitude and in a similar depth.

Remarks.—This is a slender graceful species which is only recorded with new material for the second time. Illustrations are provided herein for this rare species because the only figures of its unique characters are not readily available, are diagrammatic and slightly inaccurate.

Nymphon typhlops (Hodgson, 1915)

Chaetonymphon typhlops Hodgson, 1915:144; 1927:327–329, fig. 6.

Nymphon typhlops.—Gordon, 1944:19 [key].—Stock, 1965:22 [key].—Child, 1995a:20–21.

Nymphon spicatum Child, 1982:46–48, fig. 15.

Material examined.—Slope E of Cabo San Antonio, Argentina, 36°55.7'S, 53°01.4'W, 2707 m, sta. 245A, epibenthic sled, 14 Mar 1971, 2 ♀, 4 Juv.

Distribution.—This species was described from Antarctic specimens and the few other specimens known were collected either in Antarctic waters or in the Argentine slope and basin. The specimen described by Child (1982) as *N. spicatum* was

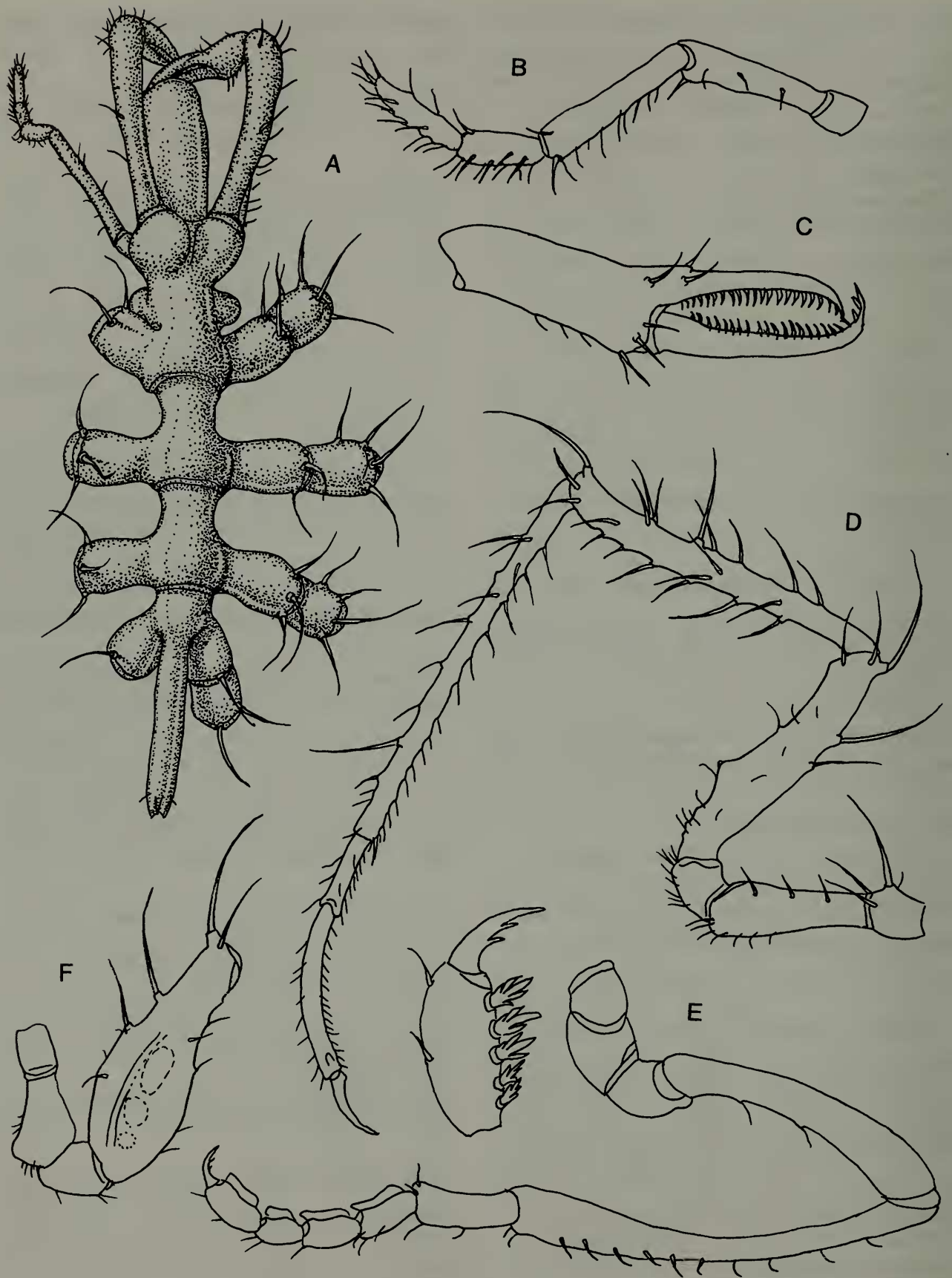


Fig. 4. *Nymphon scotiae* Stock. male: A, Trunk, dorsal view; B, Palp; C, Chela; D, Third leg; E, Oviger, with enlargement of terminal segment and claw. Ovigerous female: F, Proximal leg segments.

collected just slightly to the SE of the specimens in hand but in deeper waters. The known depth range for this species is 2450–3822 m.

Remarks.—This is another of the blind deep-sea species that either has vestigial auxilliary claws or none at all. The Argentine specimens all appear to lack auxiliaries and have a few small differences from the type specimens. The ocular tubercle is variable in its length and it appears to be directed slightly toward the posterior in most but not all specimens. The paired dorso-median trunk spines are often broken off or missing. The distal two palp segments are slightly longer in the types, the strigilis has several more denticulate spines, the chelae fingers a few more teeth, and the propodal claw is flanked by tiny auxiliaries.

Nymphon vacans, new species

Fig. 5

Material examined.—Slope E of Cabo San Antonio, Argentina, 36°55.7'S, 53°01.4'W, 2707 m, sta. 245A, epibenthic sled, 14 Mar 1971, 1 ♀, holotype, USNM 234717; 2 ♂, 5 ♀, 7 juv. paratypes, USNM 234718.

Distribution.—Known only from the type locality in 2707 m.

Description.—Size moderate, leg span about 36 mm. Trunk fully segmented, glabrous. Lateral process length about 1.5 times their diameters, separated by slightly less than their diameters, armed with two long dorsodistal spines except for second lateral processes which have three. Neck short, crowded with oviger implants. Very slight bulge of ocular tubercle placed dorsally and slightly posterior to oviger bulges, sensory papillae evident laterally, eyes entirely lacking. Proboscis a cylinder with slight distal constrictions, oral surface flat. Abdomen of moderate length, tapering distally to tiny tip, extending almost to distal rim of fourth leg first coxae, armed with four short dorsodistal setae.

Chelifores large, scapes cylindrical, slightly longer than proboscis, with slight

inward curve, armed with lateral and distal setae of varying lengths. Chelae long, slender, palm about 0.75 length of fingers, armed with short scattered setae. Fingers curved sharply at tips which overlap, immovable finger armed with short ectal setae and about 30 short teeth of varying sizes. Movable finger without setae, with about 37 teeth similar to those of immovable finger. Palps with many short setae increasing in numbers on distal segments. Second segment slightly longer than third, fourth and fifth subequal in length, combined length longer than either second or third segment.

Oviger (female) fourth segment slightly longer than fifth, sixth about 0.75 length of fifth, both with short lateral setae. Strigilis segments each shorter than last, each armed with ectal setae and endal denticulate spines in formula 8: 6: 4: 5:, spines slender, with three lateral lobes. Terminal claw slightly shorter than terminal segment, armed with six endal teeth.

Legs moderately spinose, few spines longer than segment diameters. Second tibiae the longest segments, with first tibiae very slightly shorter and femora shortest of major segments. Propodus about 0.8 as long as tarsus, both slender, armed with dorsal row of short setae and ventral row of very short sole spines. Claw about half propodal length. Auxiliaries lacking.

Male characters: size slightly smaller, oviger fourth segment quite curved, fifth about 0.3 longer, almost straight, slightly swollen distally. Fewer denticulate spines, each with only two lateral lobes. Cement glands and pores not evident.

Measurements (holotype in mm).—Trunk length, 3.55; trunk width across 2nd lateral processes, 1.8; proboscis length, 1.97; abdomen length, 1.0; third leg, coxa 1, 0.6; coxa 2, 1.18; coxa 3, 0.88; femur, 3.17; tibia 1, 3.86; tibia 2, 3.89; tarsus, 1.64; propodus, 1.3; claw, 0.66.

Etymology.—The name (Latin: *vacans*, meaning empty, void, or clear) refers to the slight bulge of the ocular tubercle which is devoid of eyes.

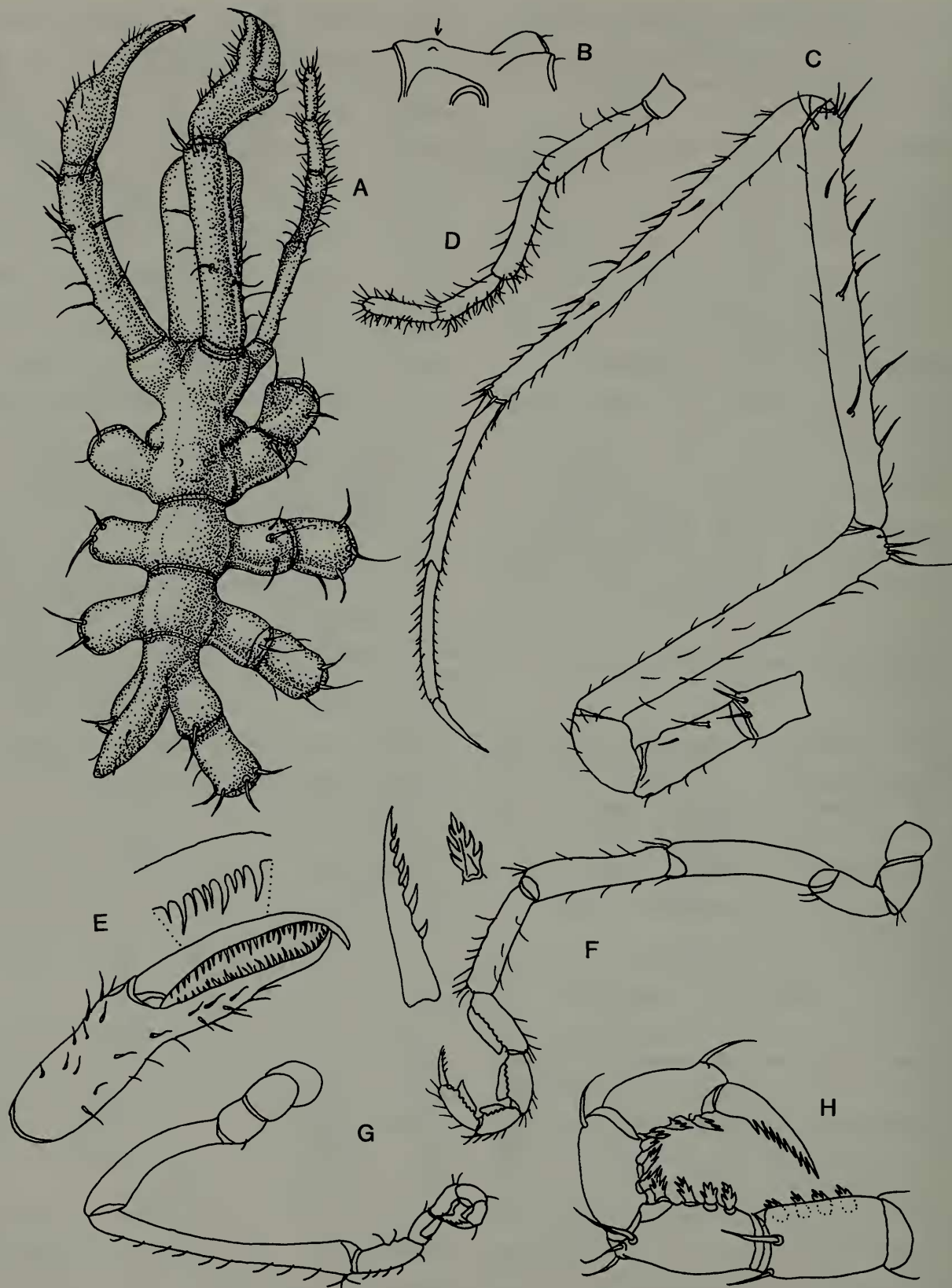


Fig. 5. *Nymphon vacans*, new species, holotype: A, Trunk, dorsal view; B, Ocular tubercle from right side; C, Third leg; D, Palp; E, Chela, with enlargement of several teeth; F, Oviger, with enlargement of denticulate spine and terminal claw. Male: G, Oviger; H, Strigilis, enlarged.

Remarks.—The habitus of this species is superficially quite close to that of *N. centrum*, discussed elsewhere in this report, and to *N. hampsoni* Child, *N. compactum* Hoek, and indeed to most members of the *N. australe*-group of related species (Child 1995a). The similarities with *N. centrum* occur in the trunk habitus of the same shape with long spines on the lateral processes, although the spines are placed differently on each species. The many small differences are in the proboscis and chelifore scape lengths; long in *N. vacans* and much shorter in *N. centrum*. The abdomen of this new species is shorter than that of *N. centrum*, and its palp segments are longer than those of the latter species.

Nymphon vacans agrees with *N. hampsoni* in lateral process length and placement, the dorsolateral spination, proboscis and chelifore length, and with other similarities in legs and palps. The major differences occur in the short male ovigers with club-shaped fifth and sixth segments in *N. hampsoni* and also in *N. compactum*. The ovigers of *N. vacans* have much longer fifth segments in relation to the fourth, and they are only slightly inflated distally and the sixth segment is much shorter in relation to the fifth. The other major difference between all of these species is in abdominal length. This varies with each species and is longest in *N. centrum* and decreases in length from *N. hampsoni*, then *N. vacans*, and is shortest in *N. compactum*.

Nymphon species indeterminate

Material examined.—Basin E of Mar del Plata, Argentina, 38°16.9'S, 51°56.1'W, 4382–4402 m, sta. 242, epibenthic sled, 13 Mar 1971, 1 ♀, 2 Juv. Same locality, 37°40.9'S, 52°19.3'W, 3906–3917 m, sta. 256, epibenthic sled, 24 Mar 1971, 1 juv.

Remarks.—The female from sta. 242 is badly damaged and the other specimens are too immature for identification.

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