Two new species of Ancistrosyllis McIntosh, 1878 (Annelida: Pilargidae) from the Gulf of Thailand, Western Pacific

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Abstract

Two new species of Pilargidae, Ancistrosyllis eidimtaiteae sp. nov. and A. suksani sp. nov., are described from the Gulf of Thailand. These Ancistrosyllis are characterized by having a median and two lateral antennae. Ancistrosyllis eidimtaiteae sp. nov. differs from all other species in the group by having brown pigmentation and by having both short antennae and tentacular cirri, first notopodial hooks from chaetiger 3, and a single type of neurochaetae (long non-limbate capillaries with bifid tips). Ancistrosyllis suksani sp. nov. can be distinguished from other species of Ancistrosyllis by the presence of the first notopodial hooks from chaetiger 4 and three types of neurochaetae (short, stout, falcates with a subdistal small guard, short limbates, and long bifid non-limbates). An updated key to the Ancistrosyllis species of this group is also provided.

Key words: Pilargids, Pilarginae, Polychaeta, Songkhla Sea, taxonomy

Introduction

Previously known Pilargidae from Thai waters include six species belonging to four genera. These species are Ancistrosyllis kornkanokae Plathong, Dean & Plathong, 2021; A. nakkaritae Plathong, Dean & Plathong, 2021; Cabira saithipae Plathong, Dean & Plathong, 2021; C. thailandica Plathong, Dean & Plathong, 2021; Hermundura annandalei Fauvel, 1932; and Sigambra phuketensis Licher & Westheide, 1997 (Fauvel 1932; Licher & Westheide 1997; Plathong et al. 2021; Salazar-Vallejo et al. 2001). In this study, the second in our analysis of the Pilargidae of the Gulf of Thailand, we describe two new species belonging to the genus Ancistrosyllis McIntosh, 1878.


According to Plathong et al. (2021), there are three groups of Ancistrosyllis species. Group I has only a median antenna (one species), Group II has both a median antenna and two lateral antennae (nine species) and Group III has two lateral antennae but lacks a median antenna (nine species). The two new species describe herein belong to group II having both a median antenna and two lateral antennae. This group, now includes 11 species: A. breviceps Hartman, 1963; A. cingulata Korschelt, 1893; A. commensalis Gardiner, 1976; A. fioronii Fiege & Böggemann, 1999; A. groenlandica McIntosh, 1878; A. hartmanae Pettibone, 1966; A. jonesi Pettibone, 1966; A. kornkanokae Plathong, Dean & Plathong 2021; A. nakkaritae Plathong, Dean & Plathong 2021 and two new species from this study, A. eidimtaiteae sp. nov. and A. suksani sp. nov. Within group II we can separate species into two subgroups...
based on the first occurrence of notopodial hooks. Subgroup A, with five species, has notopodial hooks starting from the 3rd chaetiger and includes *A. fioronii*, *A. hartmanae*, *A. kornkanokae*, *A. nakkaritae* and *A. eidimtaiteae* sp. nov. Subgroup B, with six species, *A. breviceps*, *A. cingulata*, *A. commensalis*, *A. groenlandica*, *A. jonesi* and *A. suksani* sp. nov., all with notopodial hooks beginning at chaetigers other than number three (Table 1).

The aim of this paper is to describe two new species of *Ancistrosyllis* collected from the Gulf of Thailand. The next contributions, we are preparing a series of the other genus of Pilargids.

**Materials and methods**

Samples were collected from two sites in the Gulf of Thailand during two ecological surveys. The first site was an offshore area in the Gulf of Thailand sampled as part of the long-term environmental monitoring at the offshore Petroleum Production Area of the Gulf of Thailand project, conducted from 2009–2020. This project assessed benthic diversity at several stations in offshore petroleum concession areas. The second site was in the Songkhla Sea in the Gulf of Thailand as part of two projects. The Marine and Coastal Resources Databases and Marine Community under Petroleum Platforms in Songkhla Province was conducted from 2012 to 2016 and investigated the seasonal variation of benthic fauna in Songkhla Province. The second project, Long-term environmental monitoring at the Petroleum Production Area in Songkhla Province, was conducted from 2011–2019 and assessed benthic diversity at several stations in petroleum concession areas in the Songkhla Province.

Specimens were collected using two different methods. In the offshore Petroleum Production Area in the Gulf of Thailand (8°22'53"–10°46'59"N, 100°48'03"–102°05'25"E), a Van Veen grab (0.04 m²) was used at depths ranging from 50 to 80 m and in the Songkhla Sea, the southern Gulf of Thailand (7°14'21"–7°49'22"N, 100°24'42"–100°49'01"E) a Van Veen grab (0.1 m²) was used at depths ranging from 9 to 27 m.

The collected samples were sieved in the field with 2.0 mm, 1.0 mm and 0.5 mm mesh screens. Later, water and sediment from the sieved grab samples were passed through a 300 µm filter bag. Specimens retained by both separation methods were separately fixed with a 10% formalin solution in sea water. In the laboratory samples were washed with freshwater and transferred to 70% ethanol.

Polychaetes were sorted into taxonomic groups using a stereomicroscope and examined using dissecting and compound light microscopes. Light photographs and measurements of the specimens were produced using a stereo microscope (Olympus SZX16) and a compound microscope (Leica DM1000) with a digital camera (DP74). Stacks of multifocal shots were merged into a single photograph using the Helicon Focus program.

Specimens of new species were examined using the Scanning Electron Microscopy (SEM). They were dehydrated in 100% ethanol before being critical point dried and mounted onto SEM stubs and then coated with gold. SEM photographs were taken with a Field Emission Scanning Electron Microscope (Apreeo, FEI).

The taxonomic descriptions of the new species are based on morphology and measurements of the holotype and information about variability found in the paratypes. Confirmation of the taxonomic status of the new species was based on the revision and compilation of the diagnostic characteristics from all recognized species of the genus *Ancistrosyllis* done by Glasby & Salazar-Vallejo (2022); Plathong et al. (2021); Mandal & Deb (2018); Fiege & Böggemann (1999); Imajima (1987) and Pettibone (1966). For comparative purposes tables with the main diagnostic characters of the new species and closely-related species were prepared (Table 1).

Type specimens are deposited in the Princess Maha Chakri Sirindhorn Natural History Museum, Prince of Songkla University (PSUZC), Hat Yai, Songkhla, Thailand.
FIGURE 1. Sampling sites in the Gulf of Thailand, showing stations where two new species of Ancistrosyllis, Ancistrosyllis eidimaiteae sp. nov. (triangles) and A. suksani sp. nov. (squares) were collected.
### TABLE 1. Comparison of Group II Ancistrocyllis species with presence a median antenna two lateral antennae (modified after Plathong et al. 2021). (ch-chaetiger).

<table>
<thead>
<tr>
<th>Species</th>
<th>Type locality</th>
<th>Eyespots</th>
<th>Tentacular cirri (length relative to antennae)</th>
<th>First ventral cirri (ch)</th>
<th>First notopodial hook (ch)</th>
<th>Type of neurochaetae</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. hartmanae Pettibone, 1966</td>
<td>Chesapeake Bay to Gulf of Mexico, Western Atlantic</td>
<td>Present</td>
<td>Short, subequal</td>
<td>3</td>
<td>3</td>
<td>One type, long non-limbate capillary chaeta with slightly bent tip</td>
<td>Pettibone 1966</td>
</tr>
<tr>
<td>A. fioronii Fiege &amp; Böggemann, 1999</td>
<td>North Sea, Borkum Reef, Germany</td>
<td>Absent</td>
<td>Short, filiform</td>
<td>2</td>
<td>3</td>
<td>One type, long non-limbate capillary chaeta, bidentate tip, 4–6 chaetae per fascicle</td>
<td>Fiege &amp; Böggemann 1999</td>
</tr>
<tr>
<td>A. korasanokae Plathong, Dean &amp; Plathong, 2021</td>
<td>Songkhla Sea, Gulf of Thailand</td>
<td>Absent</td>
<td>Long, slightly equal</td>
<td>3</td>
<td>3</td>
<td>Two types: short limbate chaeta and long non-limbate capillary chaeta, unidentate tips</td>
<td>Plathong et al. 2021</td>
</tr>
<tr>
<td>A. nakkaritae Plathong, Dean &amp; Plathong, 2021</td>
<td>Songkhla Sea, Gulf of Thailand</td>
<td>Absent</td>
<td>Long</td>
<td>1</td>
<td>3</td>
<td>Two types: short limbate chaeta and long non-limbate capillary chaeta, bifid tips</td>
<td>Plathong et al. 2021</td>
</tr>
<tr>
<td>A. eidimtaiteae sp. nov.</td>
<td>Songkhla Sea, Gulf of Thailand</td>
<td>Absent</td>
<td>Short, longer than lateral antennae</td>
<td>1</td>
<td>3</td>
<td>One type, long non-limbate capillary chaeta with bifid tip, 6–9 chaetae per fascicle</td>
<td>This study</td>
</tr>
</tbody>
</table>

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<table>
<thead>
<tr>
<th>Species</th>
<th>Type locality</th>
<th>Eyespots</th>
<th>Tentacular cirri (length relative to antennae)</th>
<th>First ventral cirri (ch)</th>
<th>First notopodial hook (ch)</th>
<th>Type of neurochaetae</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A. breviceps</strong></td>
<td>USA, 706 m</td>
<td>Absent</td>
<td>Subequal, longer than antenna</td>
<td>1</td>
<td>13</td>
<td>One type, long non-limbate chaeta with hooked tip</td>
<td>Hartman 1963; Pettibone 1966</td>
</tr>
<tr>
<td><strong>A. cingulata</strong></td>
<td>Adriatic Sea</td>
<td>Present</td>
<td>Two pairs</td>
<td>1</td>
<td>5</td>
<td>?</td>
<td>Korschelt 1893</td>
</tr>
<tr>
<td><strong>A. commensalis</strong></td>
<td>USA, intertidal</td>
<td>Absent</td>
<td>Short, conical</td>
<td>1</td>
<td>6</td>
<td>Two types, short limbate chaeta and long non-limbate capillary chaeta, slightly hooked tips</td>
<td>Gardiner 1976</td>
</tr>
<tr>
<td><strong>A. groenlandica</strong></td>
<td>West Greenland, 750 m</td>
<td>Absent</td>
<td>Short, subequal</td>
<td>1</td>
<td>4–6</td>
<td>Two types, short limbate chaeta and long non-limbate capillary chaeta, slightly hooked tips</td>
<td>Imajima 1987; Pettibone 1966; McIntosh 1878</td>
</tr>
<tr>
<td><strong>A. jonesi</strong></td>
<td>USA, 13 m</td>
<td>Absent</td>
<td>Short, subulate, subequal</td>
<td>3</td>
<td>6</td>
<td>One type, long non-limbate chaeta, slightly hooked tip</td>
<td>Pettibone 1966</td>
</tr>
<tr>
<td><strong>A. suksani sp. nov.</strong></td>
<td>Gulf of Thailand, 9–70 m</td>
<td>Absent</td>
<td>Short, digitate</td>
<td>1</td>
<td>4</td>
<td>Three types: 1) 1–2 short stout falcate chaetae, subdistal with small guard approaching distal tips, 2) 2–3 short limbate, bifid tip chaeta and 3) long non-limbate capillary chaeta with bifid tip</td>
<td>This study</td>
</tr>
</tbody>
</table>
Results

Systematics

Family Pilargidae Saint-Joseph, 1899

Subfamily Pilarginae Saint-Joseph, 1899

Genus Ancistrosyllis McIntosh, 1878

Diagnosis (after Glasby & Salazar-Vallejo 2022). Pilargids with body depressed, integument papillose to verrucose, present on both segmental and nonsegmental regions. Zero to three antennae. Palps unfused, biarticulated, palpostyle minute. Paired ventrolateral palpal papillae present. Pharynx distally with terminal papillae (or absent); proximally smooth or, rarely, with denticles. Two pairs of tentacular cirri. Dorsal and ventral cirri digitate to lobate. Notochaetae are hooks, starting from chaetigers 3 to 13 and continuing throughout body. Neurochaetae smooth, or spinulose capillaries, often with bidentate tips. Free living in sediments from intertidal to deep sea, or commensal with other invertebrates.

Ancistrosyllis eidimtaiteae sp. nov.
Figs 2–5

Material examined. Six specimens collected from the Songkhla Sea, Gulf of Thailand, Western Pacific, coll. Marine Ecosearch Management Co., Ltd., mud mixed with sand and shells. Holotype: PSUZC-POL-0305 (1 spec.), S09-19 (7°31’37”N, 100°42’48”E), 17 Feb. 2015, 24 m. Paratypes: PSUZC-POL-0306 (1 spec., on SEM stub), S06 (7°20’10”N, 100°36’59”E), 12 Feb. 2015, 15.5 m; PSUZC-POL-0307 (3 specs., 1 spec. on SEM stub), S08 (7°29’10”N, 100°47’06”E), 16 Mar. 2016, 25 m; PSUZC-POL-0308 (1 spec., juvenile), S09-11 (7°31’52”N, 100°42’42”E), 25 Mar. 2017, 23 m.

Type locality. Songkhla Sea, Gulf of Thailand (Fig. 1).

Diagnosis. Ancistrosyllis with body papillae brown, lacking eyespots, with small median antenna, and two short papillose lateral antennae. Tentacular cirri short, first dorsal and ventral cirri from chaetiger 1. First notopodial hooks from chaetiger 3.

Description. Holotype incomplete, 6.3 mm long, 0.5 mm wide with 33 segments. Paratypes, 2.0–22.2 mm long, 0.3–0.6 mm wide, 18–125 chaetigers. Longest specimen consists of three pieces: anterior region, 7.1 mm long with 41 chaetigers; middle region, 11.5 mm long with 55 chaetigers and posterior region with broken anal cirri, 3.6 mm long with about 29 chaetigers. Body annulated, depressed anteriorly, depressed, tapered posteriorly. Body light tan in ethanol with brownish papillae throughout. Ventral with a deep midventral groove running longitudinally (Fig. 2A–D).

Prostomium broad, bilobed, wider than long with a small median antenna present in prostomial posterior region. Lateral antennae short papillose, shorter than palps. Eyespots absent. Palps biarticulate with very small ventrolateral papillae, visible ventrally (Figs 3A–C, 5A). Pharynx not observed, retracted in holotype and paratypes, extending to chaetiger 6 (Fig. 2B).

Peristomium fused to prostomium. Two pairs of short, conical, papillose tentacular cirri inserted laterally (Figs 2B, 3A–C, 5A). Dorsal cirri short, first dorsal cirri from chaetiger 1, slightly shorter than dorsal cirri of chaetiger 2 and following chaetigers (Figs 2B, 3A–B, 5A).

Parapodia subbiramous. Notopodia reduced to a low swollen lobe, each with single aciculae, 1–2 notopodial hooks per parapodium from chaetiger 3 (Figs 2B, 3A–B, 4B–E, 5A–B).

Neuropodia well developed with conical lobes. Ventral cirri from chaetiger 1, shorter than dorsal cirri and slightly longer than neuropodial lobes (Figs 3A–B, 4B, C, E, 5A–B). Neurochaetae non-limbate capillary chaetae with bifid tips, variable in length, throughout the body. Inferior chaetae are shorter than superior chaetae, up to 9 chaetae per bundle (Figs 4C, F–G, 5B, C).

Pygidium with two anal cirri.
FIGURE 2. Light photographs of Ancistrosyllis eidimtaiteae sp. nov. (A, C. Holotype, PSUZC-POL-0305; B, D, F. PSUZC-POL-0307; E. PSUZC-POL-0308) A. Anterior region, dorsal view; B. Close up anterior, dorsal view; C. Brown papillae on the ventral region, ventral view; D. Oocytes in body, dorsal view; E. Anterior region, lateral view; F. Close up of oocytes, dorsal view. Abbreviations: dc, dorsal cirrus; nc, neurochaetae; nh, notopodial hook; tc, tentacular cirrus.
FIGURE 3. SEM micrographs of Ancistrosyllis eidimtaiteae sp. nov. (PSUZC-POL-0306) show A. Anterior region, lateral view; B. Anterior end, dorsal view; C. Prostomium, frontal view. Abbreviations: dc, dorsal cirrus; la, lateral antenna; ma, median antenna; nh, notopodial hook; tc, tentacular cirri; vc, ventral cirrus; vpp, ventrolateral palpal papilla.

Holotype and paratypes of A. eidimtaiteae sp. nov. collected in March had oocytes in the coelomic cavities of posterior chaetigers. Diameter of larger oocytes 60–72 μm (Fig. 2D, F).

Habitat. Found in 15.5–25 m water depth, in mud substrates, mixed with sand and shells.

Distribution. Songkhla Sea, the Gulf of Thailand, Western Pacific.

Etymology. The new species is name after Mrs Elena Eidimтаite, grandmother of Dr Ted Donn, Principal Ecologist at Tetra Tech, Inc.

Remarks. Ancistrosyllis eidimtaiteae sp. nov. belongs to Group II of Ancistrosyllis because it has a median and two lateral antennae. Moreover, A. eidimtaiteae sp. nov. has first notopodial hooks from chaetiger 3 and distinctive brownish body papillae. These features make it easy to differentiate from other colorless species. The new species resembles four other species of subgroup A: A. hartmanae Pettibone, 1966; A. fioronii Fiege & Böggemann, 1999; A. kornkanokae Plathong, Dean & Plathong, 2021 and A. nakkaritae Plathong, Dean & Plathong, 2021 (Table 1).

Ancistrosyllis eidimtaiteae sp. nov. differs from A. hartmanae Pettibone, 1966 in lacking eyespots and the first ventral cirri appearing at chaetiger 1, whereas A. hartmanae has a pair of eyespots and the first ventral cirri from chaetiger 3 (Pettibone 1966).

Ancistrosyllis eidimtaiteae sp. nov. differs from A. fioronii by the first ventral cirri present from chaetiger 1, having well developed, conical, truncate neuropodia, and non-limbate capillaries with bifid tips. Ancistrosyllis. fioronii has the first ventral cirri occurring from chaetiger 2, the neuropodia are poorly developed and the tips of long non-limbate capillary chaetae are bidentate (Fiege & Böggemann 1999). Moreover, the number of neurochaetae per fascicle in A. eidimtaiteae sp. nov. is greater than in A. fioronii with up to 6–9 chaetae per fascicle, rather than 4–6 chaetae per fascicle. Additionally, the body color of A. eidimtaiteae sp. nov. is brown but A. fioronii lacks pigmentation (Fiege & Böggemann 1999).
FIGURE 4. SEM micrographs of *Ancistroyllis eidimtaiteae* sp. nov. (PSUZC-POL-0306) show A. Tentacular cirri, dorsal view; B. First three parapodia, lateral view; C. Anterior parapodia, lateral view; D. Close up notopodial hook, lateral view; E. Close up parapodia, ventral view; F. Close up, long non-limbate capillary (circle shows bifid tip, lateral view); G. Same, close up, bifid tip, lateral view. Abbreviations: dc, dorsal cirrus; dtc, dorsal tentacular cirri; nc, neurochaetae; nh, notopodial hook; nlc, non-limbate capillary; p, papilla; vc, ventral cirrus.

*Ancistroyllis eidimtaiteae* sp. nov. differs from *A. kornkanokae* Plathong, Dean & Plathong, 2021 in the neurochaetae and the first appearance of ventral cirri. *Ancistroyllis eidimtaiteae* sp. nov. has a single type of non-limbate capillary chaetae with bifid tip, and the first ventral cirri appearing at chaetiger 1, whereas *A. kornkanokae* bears two types of unidentate neurochaetae, short limbate and long, non-limbate capillaries and the first ventral cirri occur from chaetiger 3. In addition, tentacular cirri and the first dorsal cirri in *A. eidimtaiteae* sp. nov. are shorter than in *A. kornkanokae*, and the body is brown in color in alcohol, whereas *A. kornkanokae* is lacking colour (Plathong et al. 2021).

*Ancistroyllis eidimtaiteae* sp. nov. most closely resembles *A. nakkaritae* Plathong, Dean & Plathong, 2021 in having the first ventral cirri at chaetiger 1 and the first notopodial hooks from chaetiger 3. However, *A. eidimta-
iteae sp. nov. differs from A. nakkaritae by having only non-limbate capillaries, and lacks short limbate capillaries. Ancistrocyllis nakkaritae has both short limbates and long non-limbate capillaries. Moreover, the lateral antennae, tentacular cirri and dorsal cirri of A. eidimtaiteae sp. nov. are shorter than those of A. nakkaritae (Plathong et al. 2021).

Finally, Ancistrocyllis eidimtaiteae sp. nov. differs from A. suksani sp. nov. in having a single type of neurochaetae and first notopodial hooks occurring at chaetiger 3 while A. suksani sp. nov. has three types of neurochaetae and the first notopodial hooks appear at chaetiger 4 (Table 1).

**FIGURE 5.** Line drawings of Ancistrocyllis eidimtaiteae sp. nov. A. Anterior end, dorsal view; B. Close up, parapodia, ventral view; C. Close up, tip of non-limbate capillary, lateral view. Abbreviations: dc, dorsal cirrus; la, lateral antenna; ma, median antenna; nh, notopodial hook; nlc, non-limbate capillary; pa, palp; tc, tentacular cirri; vc, ventral cirrus.
**Ancistrosyllis suksani** sp. nov.
Figs 6–9

**Material examined.** Nine specimens collected from the Songkhla Sea and offshore in the Gulf of Thailand, coll. Marine Ecosearch Management Co., Ltd., mud mixed with sand and shells. Holotype: PSUZC-POL-0345 (1 spec.), S02 (7°31'44"N, 100°28'15"E), 21 Sep. 2016, 10 m. Paratypes: S01 (7°46'29"N, 100°24'42"E), 16 Oct. 2013, 9.5 m; PSUZC-POL-0346 (3 specs., 1 spec. on SEM stub), S01-B1; PSUZC-POL-0347 (1 spec.), S01-B3; PSUZC-POL-0348 (1 spec., on SEM stub), S03 (7°21'02"N, 100°31'45"E), 13 Oct. 2015, 9 m; PSUZC-POL-0349 (1 spec.), GT-UR (8°20'16"N, 101°45'01"E), 9 Sep. 2015, 70 m; PSUZC-POL-0350 (2 specs., 1 spec. on SEM stub), GT-SW (9°22'59"N, 101°21'37"E), 22 May 2020, 50 m.

**Type locality.** Songkhla Sea, Gulf of Thailand (Fig. 1).

**Diagnosis.** Ancistrosyllis without eyespots; with a short median antenna and two short lateral antennae. With a pair of short tentacular cirri; dorsal and ventral cirri starting from chaetiger 1. Notopodial hooks from chaetiger 4. Three types of neurochaetae; short, stout, falcates with a small subdistal guard; short limbates with bifid tips; and long non-limbate capillaries with bifid tips.

**Description.** Holotype complete (pygidial cirri broken), 22.3 mm long, 0.7 mm wide, 99 segments. Paratypes incomplete, anterior region 1.8–8.2 mm long, 0.3–0.8 mm wide with 10–36 segments. Two posterior parts with pygidial cirri. Body depressed, light tan to light brown with numerous light yellow to brown papillae, widest in middle region, tapering anteriorly and posteriorly (Fig. 6A–C).

![FIGURE 6. Light photographs of Ancistrosyllis suksani sp. nov.](image-url)

*ANCISTROSYLLIS FROM THE GULF OF THAILAND*
Prostomium short, broad, bilobed, wider than long, with numerous brown papillae; short, small median antenna present on posterior prostomial region; two short lateral antennae present antero-laterally on prostomium, shorter than palps and tentacular cirri (Figs 6B, 7–D, 9A). Eyespots absent. Palps biarticulate with very small ventrolateral palpal papillae (Figs 7B, 7D, 9B). Pharynx not observed, retracted in holotype and paratypes, extending to chaetiger 4 (Fig. 6B).

**FIGURE 7.** SEM micrographs of *Ancistrosyllis suksani* sp. nov. (A, C, D, PSUZC-POL-0346; B, PSUZC-POL-0348; C, D, PSUZC-POL-0350) A. Anterior region, dorsal view; B. Same, lateral view; C. Prostomium, dorsal view; D. Prostomium, ventral view. Abbreviations: dc, dorsal cirrus; la, lateral antenna; ma, median antenna; nh, notopodial hook; pa, palp; tc, tentacular cirri; vc, ventral cirri; vpp, ventrolateral palpal papilla.

Peristomium with two pairs of short, digitate, papillate tentacular cirri, longer than lateral antennae, inserted laterally. Dorsal cirri present from chaetiger 1, long, conical, papillose, twice as long as dorsal cirri of chaetiger 2. Ventral cirri present from chaetiger 1, shorter than dorsal cirri (Figs 6B, 7A–D, 9A–B).
FIGURE 8. SEM micrographs of Ancistroyllis suksani sp. nov. show A. Close up anterior neuropodia, lateral view; B. Short chaetae at lower acicular lobe, ventral view; C. Close up tip of short stout falcate chaeta, lateral view; D. Close up tip of short limbate chaeta, lateral view; E. Close up tip of long non-limbate chaeta. Abbreviations: dc, dorsal cirrus; nlc, non-limbate capillary chaeta; slc, short limbate chaeta; ssc, short stout falcate chaeta; vc, ventral cirrus.
Parapodia subbiramous, notopodia reduced with a single acicula. Notopodial hooks present from chaetiger 4; large, strong falcate, 1–2 hooks per parapodium with the second one non-emergent (Figs 6B, 6C, 7A–B). Neuropodia well-developed conical lobes, conical with a single aciculum (Figs 6A–B, 7A–B, 8A, 9B).

Neurochaetae three types: two types of short chaetae and one type of long non-limbate chaeta; 1) short, stout falcates, with small subdistal guard approaching distal tips (Figs 8A-C, 9C), 2) short limbate with bifid tips (Figs 8A, B, D, 9C) and 3) long non-limbate capillaries with bifid tips (Fig. 8A, E). Each neuropodium with 5–7 long non-limbate capillaries above neuroacicula and 1–2 short, stout falcates with a subdistal guard, 2–3 short bifid limbsates, and 1 long non-limbate below neuroacicula (Figs 8A–E, 9C).

**FIGURE 9.** Line drawings of *Ancistroyllis suksani* sp. nov. A. Anterior region, dorsal view; B. Prostomium, ventral view; C. Close up, short stout falcate and short limbate, lateral view. Abbreviations: dc, dorsal cirrus; la, lateral antennae; ma, median antenna; nh, notopodial hook; pa, palp; pe, peristomium; slc, short limbate; ssc, short stout falcate; tc, tentacular cirrus; vc, ventral cirrus; vpp, ventrolateral palpal papilla.

Pygidium conical with pair of anal cirri.

Small oocytes were found in the body and parapodia of large specimen collected in October 2013 (Fig. 6D).

**Etymology.** The new species is named in honor of Mr. Suksan Jinanarong, the senior staff of Tetra Tech, Inc. (Thailand) for his work on marine benthos of Songkhla Sea, Gulf of Thailand with our team (MEM and Coral Reefs and Benthos Research Unit) from the beginning of our research.

**Habitat.** Living in 9–70 m water depth, mud mixed with sand and shells.

**Distribution.** Gulf of Thailand, Western Pacific (Fig. 1).

**Remarks.** *Ancistroyllis suksani* sp. nov. belongs to the group II of *Ancistroyllis* characterized by the presence of both a median antenna and two lateral antennae. It resembles *A. groenlandica* McIntosh, 1878 in having the first dorsal and ventral cirri from chaetiger 1 and the first notopodial hooks from chaetiger 4 (Table 1). However, *A. suksani* sp. nov. differs from *A. groenlandica* regarding neurochaetae in that it has three different types: 1) short, stout
falcates with a subdistal guard approaching distal tips, 2) short bifid limbsates, and 3) long non-limbate capillaries with bifid tips. *Ancistrosyllis groenlandica* has only two types of neurochaetae: short limbsates and long non-limbate capillaries with slightly hooked tips (Imajima 1987; Pettibone 1966). Moreover, the first notopodial hooks of *A. suksani* sp. nov. always starts from chaetiger 4, whereas in *A. groenlandica* the first notopodial hooks occurs variably from chaetiger 4 to 6 (Imajima 1987; Pettibone 1966).

*Ancistrosyllis suksani* sp. nov. is clearly distinguished from other species of group II of *Ancistrosyllis* species by having the first notopodial hooks at chaetiger 4, and having three types of neurochaetae (Table 1).

**Key to the species of Group II Ancistrosyllis**
(modified after Plathong, Dean & Plathong 2021)

1. Eyespots present ................................................................. 2
   - Eyespots absent ................................................................ 3
2. First notopodial hooks from chaetiger 3; ventral cirri from chaetiger 3 ................................... *A. hartmanae Pettibone, 1966*; Chesapeake Bay-Gulf of Mexico, Western Atlantic
   - First notopodial hooks from chaetiger 5, ventral cirri from chaetiger 1 ............................... *A. cingulata Korschelt, 1893*; Adriatic Sea
3. First notopodial hooks from chaetiger 3 .................................................................................. 4
   - First notopodial hooks from other chaetigers ..................................................................... 7
4. Neurochaetae, single type, long non-limbate capillary chaetae ............................................... 5
   - Neurochaetae of 2 or more 2 types .................................................................................... 6
5. Ventral cirri from chaetiger 1; neurochaetae bifid tip; body papillae brown .......................... *A. eidiimtaiteae sp. nov.*; Gulf of Thailand, Western Pacific
   - Ventral cirri from chaetiger 2; neurochaetae, bidentate tip; body whitish ............................ *A. fioronii Fiege & Böggemann, 1999*; North Sea, Atlantic Ocean
6. Ventral cirri from chaetiger 1; neurochaetae bifid tips .............................................................. *A. nakkaritae Plathong, Dean & Plathong, 2021*; Gulf of Thailand, Western Pacific
   - Ventral cirri from chaetiger 3; neurochaetae unidentate tips .............................................. *A. korikorakae Plathong, Dean & Plathong, 2021*; Gulf of Thailand, Western Pacific
7. Ventral cirri from chaetiger 1 .................................................................................................. 8
   - Ventral cirri from chaetiger 3, first notopodial hooks from chaetiger 6 ............................... *A. jonesi Pettibone, 1966*; Maryland, Atlantic Ocean
8. First notopodial hooks from chaetiger 4–6 ............................................................................... 9
   - First notopodial hooks from chaetiger 13 ........................................................................... *A. breviceps Hartman, 1963*; Southern California, Pacific Ocean
9. Two types of neurochaetae .................................................................................................... 10
   - Three types of neurochaetae ..............................................................................................
   - First dorsal cirri length as those of chaetiger 2, first notopodial hooks from chaetiger 4–6 .................................................................................................................. *A. groenlandica McIntosh, 1878*; off Greenland, Arctic Ocean
10. First dorsal cirri slightly longer than following ones; notopodial hooks begin at chaetiger 6 ......................................................................................................................... *A. commensalis Gardiner, 1976*; North Carolina, Atlantic Ocean

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