

OBSERVATIONS ON THREE KNOWN FREE-LIVING
MARINE NEMATODES OF THE FAMILY IRONIDAE
(NEMATODA: ENOPLIDA) AND A DESCRIPTION OF
THALASSIRONUS LYNNAE N. SP. FROM
NORTHWEST FLORIDA

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Abstract.—Two known species of free-living marine nematodes, *Thalassironus britannicus* and *Thalassironus americanus*, are described from sediments vegetated with manatee grass (*Syringodium filiformis*) and shoal grass (*Halodule wrightii*) and non-vegetated sediments from St. Andrew Bay, Bay County, Florida. Differences between specimens from the two habitats are discussed. *Thalassironus lynnae* n. sp. is described from vegetated sediments in St. Andrew Bay. It differs from the other species in the genus by having a long, flagellate tail, shorter more posteriorly located double cervical setae, and by the presence of a segmented, pre-anal papilla in males. A key to the species of the genus *Thalassironus* is given. *Ironella prismatolaima* is described from non-vegetated sediments from the Gulf of Mexico off Sea Horse Key, Levy County, Florida.

Chitwood (1960) discussed the genera of the family Ironidae De Man, 1876, and provided a key to their identity. Lorenzen (1981) discussed the taxonomic characters of the members of the Ironidae and listed the genera within the subfamily Thalassironinae Andrassy, 1976. Species belonging to two of the genera of the Thalassironinae, *Thalassironus* De Man, 1889, and *Ironella* Cobb, 1920, were recently recovered from sediments in St. Andrew Bay, Bay County, Florida and the Gulf of Mexico off Levy County, Florida. The specimens of *Thalassironus* described herein were recovered from subtidal, non-vegetated sediments or subtidal sediments vegetated with either manatee grass (*Syringodium filiformis*) or shoal grass (*Halodule wrightii*) in St. Andrew Bay by the writer. The specimens of *Ironella prismatolaima* Cobb, 1920, were loaned by Dr. Armen C. Tarjan from the University of Florida Nematode Collection. The specimens of *I. prismatolaima* were recovered from subtidal, non-vegetated sediment from the Gulf of Mexico.

Materials and Methods

Specimens of *Thalassironus* were collected with a core sampler 4.5 cm in diameter and 10 cm in length and were extracted from the sediment by repeated washing and decanting. Nematodes were removed alive, fixed in hot alcohol-formalin-acetic acid, cleared in glycerine and mounted in anhydrous glycerine on Cobb slides. The borrowed specimens of *Ironella* had been fixed in formalin and mounted in anhydrous glycerine on Cobb slides. Nematodes were measured with a calibrated ocular micrometer. All measurements are given in μm unless otherwise stated, and the mean is followed by the range in parentheses. Spicular lengths are given as the chord of the arc.

Ironidae De Man, 1876
Thalassironinae Andrassy, 1976
Thalassironus De Man, 1889

The genus *Thalassironus* contains those members of the family Ironidae in which the cephalic sensillae are setiform; there are

two subventral and a single, double, dorsal tooth; spicules are equal in length and caudal glands are present. The genus contains the following species: *Thalassironus britannicus* De Man, 1889, *Thalassironus bipartitus* (Wieser, 1953) Chitwood, 1960, *Thalassironus jungi* Inglis, 1964, *Thalassironus bisetosus* Vitiello, 1970, and *Thalassironus americanus* Keppner, 1986. The sixth species of the genus is described herein. In addition, specimens of *T. britannicus* collected from two habitats in St. Andrew Bay are described and additional observations are provided for *T. americanus* from vegetated sediments.

Thalassironus lynnae, new species

Figs. 1–6, 29, 30

Diagnosis.—Two males and one female. Body slender, cuticle smooth; distinct longitudinal and transverse striations absent. Head with 6 small, labial papillae. Cephalic setae arranged as anterior circle of 6 long setae and circle of 4 short submedian setae immediately posterior to circle of 6; posterior circle of 4 setae about 0.7 length of anterior 6 setae. Stoma long, narrow, with cuticularized walls and 3 prominent, anteriorly directed teeth (2 subventral and 1 double dorsal) at anterior end. One male with additional 3 teeth at level of amphid. Amphids just posterior to lateral cephalic setae; each amphid with short seta just posterior to middle of posterior margin. Short cervical setae arranged on each side as 1 subdorsal, 1 dorsoventral, 1 lateral, 1 ventrolateral and 1 subventral; each appears double with wide base, separated only at tip. Excretory pore anterior to cephalic setae. Somatic setae not observed, caudal setae sparse or absent. Esophagus surrounding buccal cavity and attaching to cephalic cuticle anteriorly, peribuccal portion expanded, then narrowed to nerve ring and expanded to junction with intestine. Tail conical then cylindrical; caudal glands present; presence or absence of spinneret could

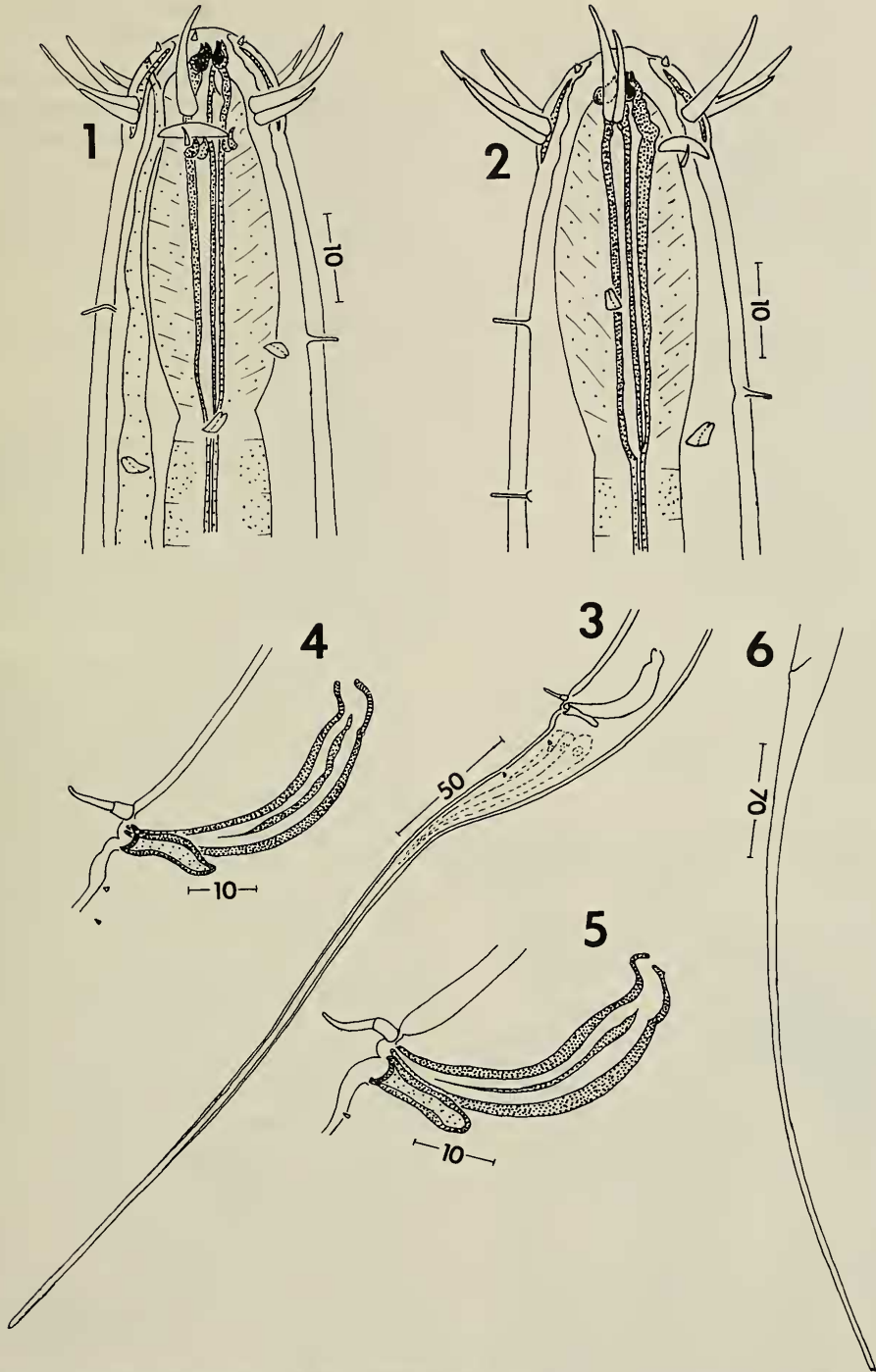
not be determined with certainty with light microscope.

Males ($n = 2$): Length 3.13 mm (3.06–3.19), width at midbody 31 (30–32). Head diameter 18 (18–18) at level of cephalic setae; cephalic setae 15 (14–16) and 10.5 (10–11) long. Amphids 5.5 (5–6) wide. Stoma 40.5 (39–42) long and 6 (6–6) wide at base of teeth. Esophagus 355 (347–363) long; nerve ring 120 (115–125) from anterior end. Tail 300 long in holotype specimen and 245 long in paratype specimen but appears broken. Width at anus 26.5 (26–27). Tail with small setae on conical portion. Single large, segmented, midventral, pre-anal papilla present. Spicules 37.5 (35–40) long, broad, slightly curved. Gubernaculum 15 (14–16) long; elongate with blunt tip. $a = 100.9$ (99.7–102.0); $b = 8.81$ (8.43–9.19); $c = 10.2$ (holotype), 13.0 (paratype).

Female ($n = 1$): Length 3.84 mm, width at midbody 38. Head diameter at level of cephalic setae 19; cephalic setae 14 and 11 long. Amphids 6 wide. Stoma 42 long and 6 wide at base of teeth. Esophagus 389 long; nerve ring 120 from anterior end. Tail appearing broken, 506 long and 27 wide at anus; caudal setae not observed. Reproductive system amphidelphic, ovaries reflexed; vulva 1.85 mm from anterior end. Walls of vagina thin, not heavily cuticularized. $a = 101.1$; $b = 9.87$; $c = 7.59$; $V = 48\%$.

Remarks.—*Thalassironus lynnae* belongs to that group of species in which the longer cephalic setae are about equal to the corresponding head diameter and the cervical setae are double or appear double. *Thalassironus lynnae* differs from the species in the group (*T. britannicus*, *T. jungi*, and *T. americanus*) in the presence of a long narrow tail; in the shorter, more posteriorly located double, cervical setae; presence of a small post-amphidial seta; and the presence of the segmented, pre-anal papilla in males. The first pair of cervical setae in the other three species is long and located just posterior to the amphids.

Type specimens.—Holotype male, USNM



Figs. 1-6. *Thalassironus lynnae*: 1, Paratype male, head, lateral view; 2, Holotype male, head, sublateral view; 3, Male, posterior end, lateral view; 4, Holotype male, left spicule and gubernaculum, lateral view; 5, Male paratype, left spicule and gubernaculum, lateral view; 6, Female, posterior end, lateral view. Scales in μm .

Table 1.—Selected measurements of males of the genus *Thalassironus**.

Species	Length cephalic setae	Length stoma	Length spicules	Length gubernaculum	Pairs cervical setae	Length tail	Demanian ratios		
							a	b	c
<i>T. bisetosus</i> Vitiello (1970)	7	39-42	82-84	28	0	151-154	67-86	15.8-16.5	39.0-41.7
<i>T. bipatitus</i> (Wiesser, 1953)	7.5 & 6.5	42-46	52	—	0	4.5-5.0 AD†	30-38	5.1-5.6	10.2-10.9
<i>T. jungi</i> Inglis (1964)	26-27 & 14-16	97-101	58-60	28-30	1	186-204	63.3-66.3	7.3-7.6	26.9-28.2
<i>T. lynnae</i> n. sp.	14-16 & 10-11	39-42	35-40	14-16	5	245-300	99.7-102.0	8.43-9.19	10.2-13.0
<i>T. britannicus</i> Warwick (1977)	26-28 & 11-12	67-77	62-72	30-38	4	190-225	—	—	—
<i>T. britannicus</i> Yoshimura (1980)	21-24 & —	—	68-72	26-28	4	145-166	66.4-69.4	10.5-11.2	41.2-43.7
<i>T. britannicus</i> non-vegetated	24 & 10	72	56	29	4	147	41.2	6.62	21.8
<i>T. britannicus</i> vegetated	22-24 & 6-7	48-49	32-35	16-18	4	100-110	82.7-91.6	8.58-8.74	30.6-30.8
<i>T. americanus</i> non-vegetated	18-20 & 4-6	58-60	55-56	15-17	1	123-126	78.4-88.5	8.58-8.93	31.9-33.7
<i>T. americanus</i> vegetated	18-20 & 5-6	53-56	42-46	11-14	4	107-118	101.6-128.3	9.03-10.7	35.2-40.2

* = measurements in microns; † = anal diameters.

77101; paratype male, USNM 77102; allotype female, USNM 77103.

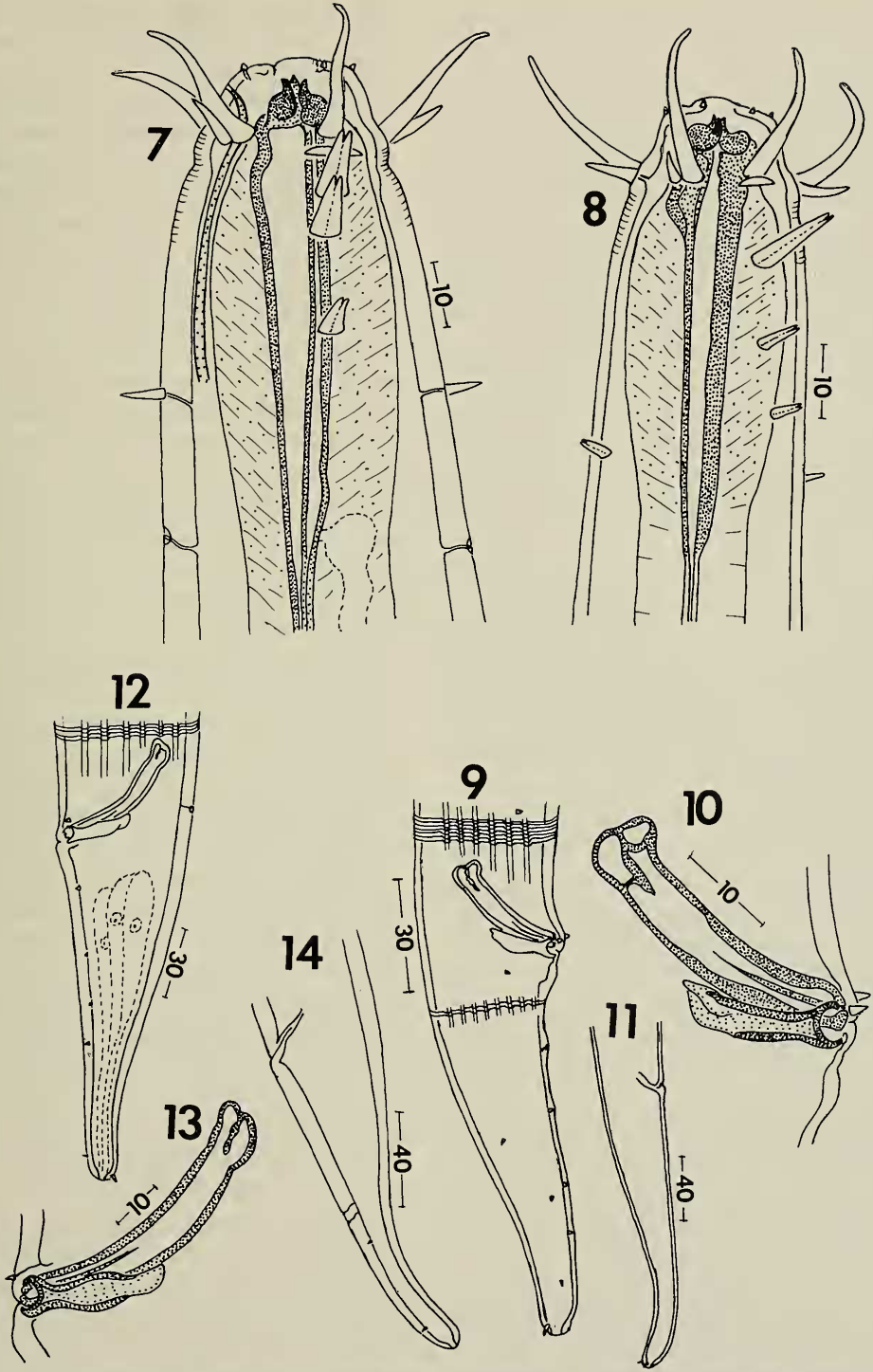
Type locality.—Subtidal sediment vegetated with manatee grass from mouth of Freshwater Bayou, St. Andrew Bay, Bay County, Florida (85°39'00"W, 30°07'30"N).

Etymology.—Named for my wife Lynn, in appreciation for her help with and generous support of my studies on nematodes.

Thalassironus britannicus De Man, 1889
Figs. 7-14, 31, 32

Diagnosis.—Two males and one female were recovered from vegetated sediments, and one male and two juvenile females were recovered from non-vegetated sediments in St. Andrew Bay. Although obviously the same species, the specimens from the two sites differed appreciably in some characters (Table 1).

Body long, slender or broad. Cuticle with delicate transverse striations beginning just posterior to cephalic setae, extending length of body; broad longitudinal striations present for length of body. Head with 3 lips, 6 small labial papillae and single circle of 10 (6 + 4) cephalic setae; 4 submedian setae about 0.3-0.4 length of other 6. Stoma long, narrow with cuticularized walls and 3 prominent teeth (2 subventral and 1 double dorsal) at anterior end. Amphids just posterior to lateral cephalic setae. Cervical setae double, separated only at tips; arranged as 3 setae in longitudinal row on each lateral surface and 1 seta on dorsal and ventral surfaces. Lateral cervical setae decreasing in length from anterior to posterior. Somatic setae not observed in specimen from non-vegetated sediment, present posteriorly in specimens from vegetated sediments. Small papilla-like structures present in cervical and caudal region in specimens from non-vegetated sediment; not observed in specimens from vegetated sediments. Caudal setae present. Excretory pore anterior to cephalic setae. Esophagus surrounding buccal cavity and attaching to cephalic cuticle, peribuccal portion expanded, then narrowed to nerve



Figs. 7-14. *Thalassironus britannicus*: 7, Male, head, sublateral view, from non-vegetated sediment; 8, Male, head, sublateral view, from vegetated sediment; 9, Male, posterior end, lateral view, from vegetated sediment; 10, Male, right spicule and gubernaculum, lateral view, from vegetated sediment; 11, Female, tail, lateral view, from non-vegetated sediment; 12, Male, posterior end, lateral view, from non-vegetated sediment; 13, Male, left spicule and gubernaculum, lateral view, from non-vegetated sediment; 14, Female, tail, lateral view, from non-vegetated sediment. Scales in μm .

ring and expanded to junction with intestine. Tail short, conical; spinneret and caudal glands present.

Males ($n = 3$): Table 1 gives the measurements for the males from non-vegetated and vegetated sediments separately. The following represents the totals of specimens from both sites. Length 3.26 mm (3.06–3.39), width at midbody 50.7 (37–78). Head diameter 24.3 (22–29) at level of cephalic setae; cephalic setae 23 (22–24) and 7.7 (6–10) long. Stoma 56 (48–72) long and 10.3 (8–13) wide at base of teeth. Amphid 7.7 (6–11) wide. Lateral, double, cervical setae located 21.7 (19–24), 29 (26–32), and 44.7 (42–48) from anterior end. Esophagus 410 (350–485) long; nerve ring 97 (83–115) from anterior end. Tail 119 (100–147) long and 40 (37–46) wide at anus. Tail with single pair small, pre-anal, subventral setae, 4–5 pairs subventral post-anal setae and single pair at tail tip. Spicules 41 (32–56) long; almost straight, broad. Gubernaculum 20.7 (16–29) long, elongate with blunt, cup-shaped distal end. $a = 71.8$ (41.2–91.6); $b = 7.98$ (6.62–8.74); $c = 27.7$ (21.8–30.8).

Mature female ($n = 1$): Specimen from vegetated sediment. Length 3.75 mm, width at midbody 42. Head diameter 22 at level of cephalic setae; cephalic setae 18 and 6 long. Amphids 6 wide. Stoma 48 long and 10 wide at base of teeth. Lateral cervical setae located 21, 27, and 43 from anterior end. Esophagus 411 long; nerve ring 147 from anterior end. Tail 131 long and 29 wide at anus. Caudal setae restricted to single pair at tail tip. Reproductive system amphidelphic, ovaries reflexed; vulva 2.31 mm from anterior end. Vagina with heavily cuticularized walls, brown in color. $a = 89.3$; $b = 9.12$; $c = 28.6$; $V = 62\%$.

Juvenile females ($n = 2$): Specimens from non-vegetated sediments. Length 3.07 mm (3.01–3.12), width at midbody 85 (80–90). Head diameter 29.5 (29–30) at level of cephalic setae; cephalic setae 21.5 (21–22) and 9.5 (9–10) long. Amphid 9.5 (9–10) wide. Stoma 74.5 (69–80) long and 11 (11–11)

wide at base of teeth. Lateral cervical setae located 21.5 (21–22), 32 (27–37) and 49.5 (43–56) from anterior end. Tail 153 (149–157) long and 50.5 (50–51) wide at anus. Caudal setae sparse, located posteriorly on tail. Reproductive system amphidelphic, ovaries reflexed; vulva 1.84 mm (1.81–1.86) from anterior end. Vagina with heavily cuticularized walls, brown in color. $a = 36.2$ (34.7–37.6); $b = 6.04$ (5.91–6.17); $c = 20.1$ (19.9–20.2); $V = 60\%$ (60–60).

Remarks.—The male and juvenile females from non-vegetated sediments agree with the descriptions of *T. britannicus* given by Warwick (1977) and Yoshimura (1980) except for the shorter body length and somewhat shorter spicules. However, the specimens from vegetated sediments differ appreciably from the above descriptions in the shorter length of the stoma, in the larger “a” value and in the thinner cuticle. In addition, the males from vegetated sediments differ from the above males in the shorter length of the spicules and gubernaculum.

Specimens.—Three males, USNM 77104, 77105, 77106; one female, USNM 77107; two juvenile females, USNM 77108, 77109.

Locality.—Non-vegetated, subtidal sediment in St. Andrew Bay at the National Marine Fisheries Service Laboratory, Panama City, Bay County, Florida (85°42'43"W, 30°08'33"N). Subtidal sediments vegetated with manatee grass or shoal grass in Freshwater Bayou, St. Andrew Bay, Bay County, Florida (85°39'00"W, 30°07'30"N).

Thalassironus americanus Keppner, 1986
Figs. 15–21, 33, 34

Diagnosis.—Five males and three females were recovered from vegetated sediments (manatee grass or shoal grass). The original description of *T. americanus* was based on specimens from non-vegetated sediments. Table 1 gives the measurements of the type material for comparison with that given below for those from vegetated sediments.

Body long, slender; cuticle smooth. Head with 3 lips, 6 small, labial papillae and single circle of 10 (6 + 4) cephalic setae; lateral and 4 submedian setae about $\frac{1}{4}$ length of longer 4 submedian setae. Four double cervical setae in longitudinal row on each lateral surface. First lateral cervical seta much longer than others, not separated at tip; 3 posterior laterals short with elongate base, separated at tip. Single normal seta present dorsally and ventrally just posterior to last double, lateral seta. Somatic setae not observed, caudal setae present. Stoma long, narrow, with cuticularized walls and 3 prominent teeth (2 subventral and 1 double dorsal) at anterior end. Anterior points of subventral teeth between 2 points of dorsal tooth resulting in points being in straight, transverse series at oral aperture. En face views of *T. americanus* at various levels similar in structure to that described for *Thalassironus jungi* by Van der Heiden (1975). Amphids just posterior to lateral cephalic setae. Excretory pore anterior to cephalic setae. Esophagus surrounding buccal cavity and attaching anteriorly to cephalic cuticle, peribuccal portion expanded, then narrowing to nerve ring and expanding to junction with intestine. Male tail short, conical; female tail conical then expands to tip. Caudal glands and spinneret present.

Males (n = 5): Length 4.15 mm (3.86–4.62), width at midbody 36.4 (34–40). Head diameter 22.2 (21–24) at level of cephalic setae; cephalic setae 19 (18–20) and 5.2 (5–6) long. Amphids 9 (8–10) wide. Stoma 53.8 (53–56) long and 8.8 (8–10) wide at base of teeth. Lateral double cervical setae located 24.2 (22–27), 50.2 (45–58), 64.2 (58–69) and 85.4 (83–88) from anterior end. Esophagus 428 (411–438) long; nerve ring 149 (141–155) from anterior end. Tail 112 (107–118) long and 34.4 (34–35) wide at anus. Tail with 5 midventral, post-anal supplement-like structures; caudal setae sparse, 1 pair at tail tip. Spicules 44.4 (42–46) long, broad, arcuate with blunt tips. Gubernaculum short, broad, 11.6 (11–14) long. a = 114.3

(101.6–128.3); b = 9.7 (9.03–10.7); c = 37.1 (35.2–40.2).

Females (n = 4): Length 4.33 mm (4.17–4.51), width at midbody 36.8 (35–38). Head diameter 22.5 (21–24) at level of cephalic setae; cephalic setae 18.5 (18–19) and 4.5 (4–5) long. Amphids 9 (8–10) wide. Stoma 54 (53–56) long and 8.8 (8–10) wide at base of teeth. Lateral, double, cervical setae located 24 (22–26), 44.3 (43–45), 59.7 (53–64) and 81 (78–83) from anterior end. Esophagus 421 (400–442) long; nerve ring 145 (141–149) from anterior end. Tail 133 (128–136) long and 28.2 (27–30) wide at anus. Caudal setae sparse. Reproductive system amphidelphic, ovaries reflexed; vulva 3.14 mm (2.99–3.19) from anterior end. Vagina with heavily cuticularized walls, brown in color. a = 118.0 (112.7–124.0); b = 10.3 (9.40–10.8); c = 32.6 (30.7–33.7); V = 72.8% (70–76).

Remarks.—The specimens from non-vegetated sediments differ from those from vegetated sediments in that the cuticle is thicker, the spicules and gubernaculum are longer, the three posterior pairs of double cervical setae appear absent and the “a” value is smaller.

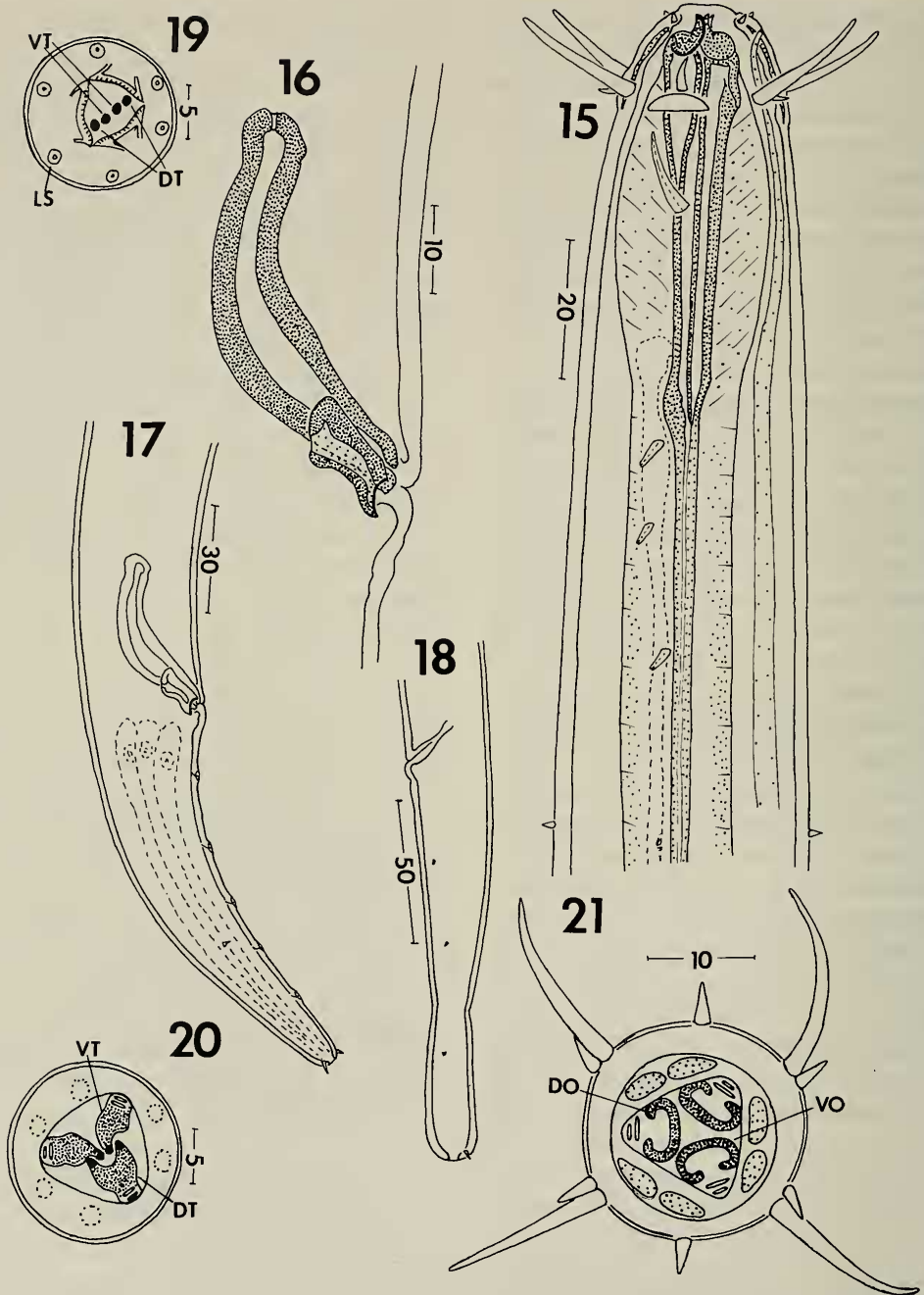
Specimens.—Three males, USNM 76391, 77110, 77111; 5 females, USNM 76390, 76392, 77112, 77113, 77114.

Locality.—Sediments vegetated with manatee grass or shoal grass in Freshwater Bayou, St. Andrew Bay, Bay County, Florida (85°39'00"W, 30°07'30"N).

Key to the Species of the Genus *Thalassironus* De Man, 1889

Vitiello (1970) provided a key to the species of *Thalassironus*. Warwick (1977) corrected the character used in the key for *T. britannicus*. The following key incorporates the species added since 1970.

1. Longer cephalic setae less than $\frac{1}{2}$ corresponding diameter; double cervical setae absent 2
- Longer cephalic setae greater than $\frac{1}{2}$



Figs. 15-21. *Thalassironus americanus* from vegetated sediment: 15, Male, anterior end, lateral view; 16, Male, right spicule and gubernaculum, lateral view; 17, Male, posterior end, lateral view; 18, Female, tail, lateral view; 19, Male, en face view, extreme anterior end; 20, Male, en face view, level of base of teeth; 21, Male, en face view, level of cephalic setae. (Abbreviations for Figs. 19-21: LS = labial seta, DT = dorsal tooth, VT = subventral tooth, DO = dorsal odontophore, VO = subventral odontophore.) Scales in μm .

- corresponding diameter; double cervical setae present 3
- 2. Cuticle transversely striated. Tail 2.1–2.2 anal diameters long, conical with narrow, cylindrical, distal part. Spicules 82–84 long
 *T. bisetosus* Vitiello, 1970
- Cuticle smooth. Tail 4.5–5 anal diameters long, conical. Spicules 52 long .. *T. bipartitus* (Wieser, 1953)
 Chitwood, 1960
- 3. Tail long, flagellate; males with segmented, pre-anal papilla
 *T. lynnae* n. sp.
- Tail short, conical, not flagellate; males without segmented, pre-anal papilla 4
- 4. Head with 6 long and 4 short cephalic setae. Double cervical setae located in stomatal region only ...
 *T. britannicus* De Man, 1889
- Head with 4 long and 6 short cephalic setae. Double cervical setae in stomatal region and posterior to stoma 5
- 5. Single pair double cervical setae just posterior to amphid. Spicules almost straight; gubernaculum elongate. Female tail conical
 *T. jungi* Inglis, 1964
- Four pairs lateral, double cervical setae; first posterior to amphid, remainder posterior to stoma. Spicules arcuate; gubernaculum short, broad. Female tail tip clavate ...
 *T. americanus* Keppner, 1986

Ironella Cobb, 1920

Ironella prismatolaima Cobb, 1920

Figs. 22–28, 35–37

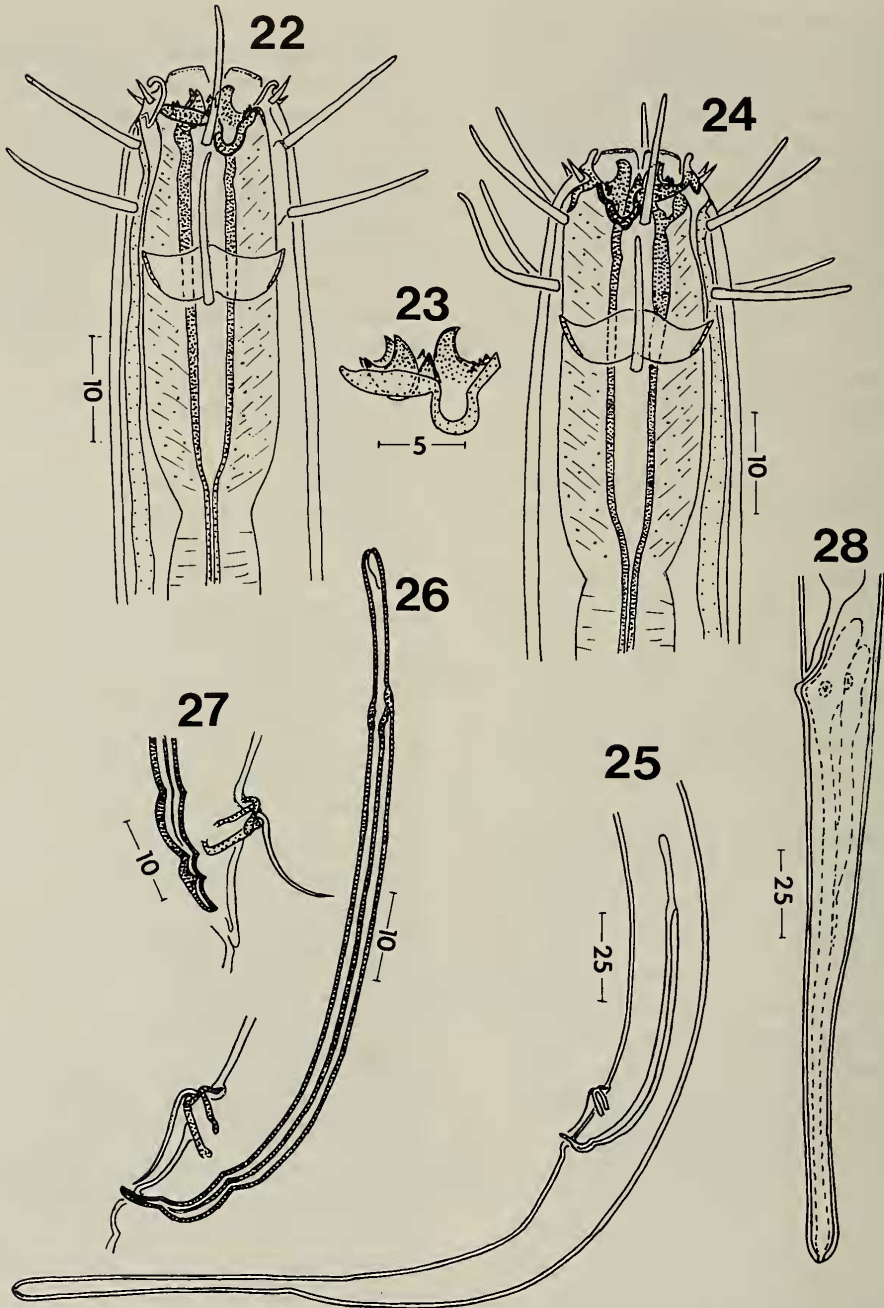
Diagnosis.—Body short, slender; cuticle thin, smooth. Head with 6 lips each with short seta; cephalic setae arranged as anterior circle of 6 and posterior circle of 4; all of equal length. Stomatal wall thickened at level of base of teeth. Amphid large, located

about midlevel of stoma. Single long, post-amphidial seta on each lateral surface. Stomatal walls cuticularized with anteriorly directed teeth arranged as 3 large (1 dorsal and 2 subventral) and 2 smaller laterals. Subventrals with large median point and smaller distal point; denticles present at base of dorsal tooth. Cervical, somatic and caudal setae not observed. Esophagus surrounding buccal cavity and attaching to cephalic cuticle. Excretory pore anterior to first circle cephalic setae. Tail long, conical then cylindrical. Caudal glands and spinneret present.

Males (n = 4): Length 1.61 mm (1.48–1.73), width at midbody 23 (22–24). Head diameter 20 (19–21) at level of amphid. Cephalic setae 12.5 (11–13) and 12.8 (11–14) long. Amphid 13.5 (11–15) wide. Stoma 35.3 (32–37) long and 5.5 (5–6) wide at base of teeth. Esophagus 334.2 (310–352) long; nerve ring 137 (122–146) from anterior end. Tail 154 (133–166) long and 21.8 (21–22) wide at anus. Single, tubular, pre-anal supplement 15 (14–16) from anus, aperture directed almost anteriorly with 1 long seta projecting from it. Spicules 87.8 (80–94) long, equal, curved; capitulum narrower than remainder of spicule. Gubernaculum, if present, a thin plate. a = 70.1 (65.0–75.9); b = 4.81 (4.68–4.91); c = 10.5 (9.94–11.1).

Female (n = 1): Length 1.61 mm, width at midbody 43. Head diameter 26 at level of amphid. Cephalic setae broken or absent. Amphid 13 wide. Stoma 42 long and 6 wide at base of teeth. Esophagus 325 long; nerve ring 131 from anterior end. Tail 168 long and 22 wide at anus. Reproductive system amphidelphic, ovaries reflexed; vulva 806 from anterior end. a = 37.4; b = 4.95; c = 9.58; V = 50%.

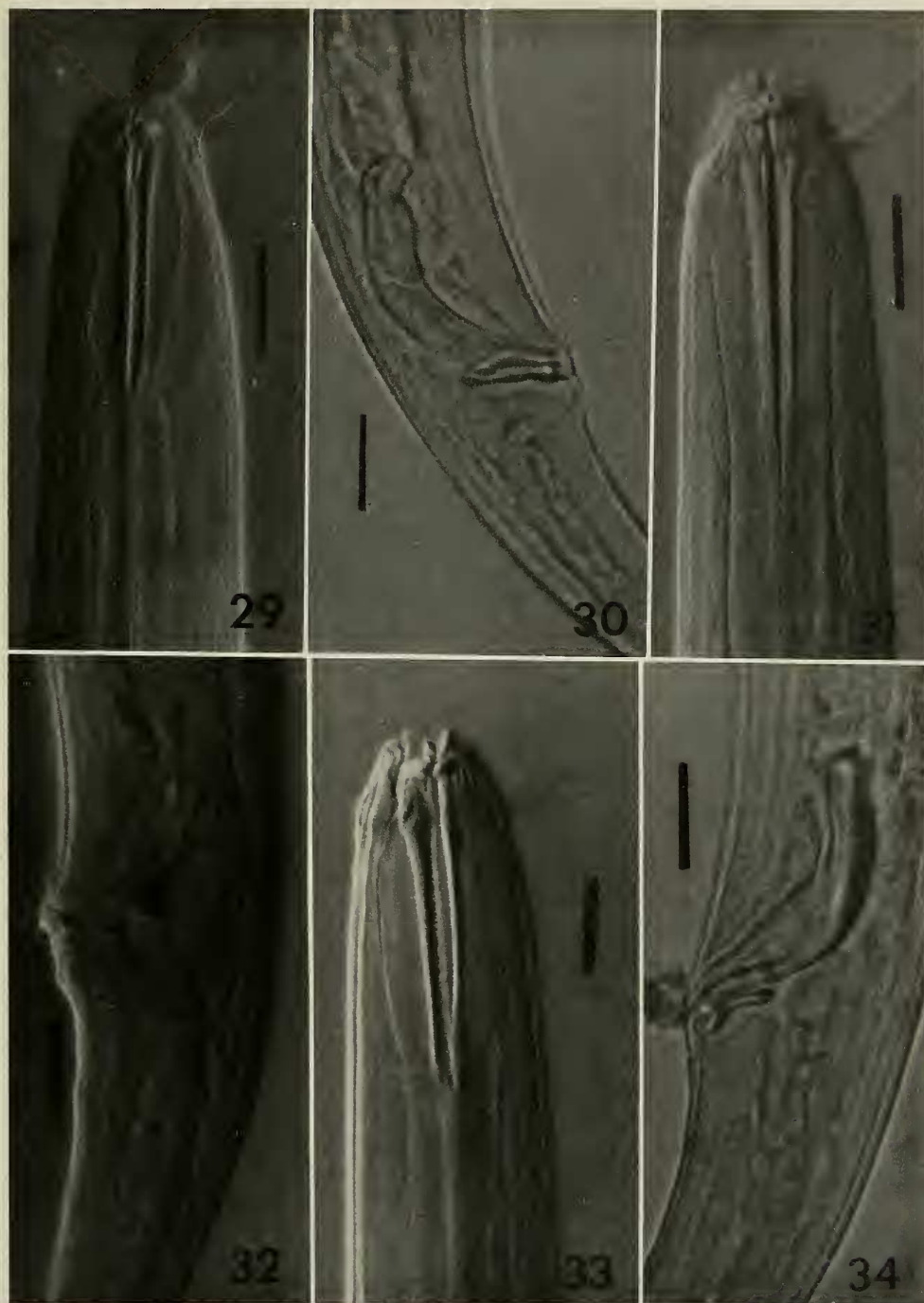
Remarks.—The genus *Ironella* contains two species, *I. prismatolaima* Cobb, 1920, and *I. cobbi* Timm, 1952. Cobb (1920) did not provide a drawing of the male genital apparatus of *I. prismatolaima*. Riemann (1966) described *I. prismatolaima* from European waters, and mentioned that this male



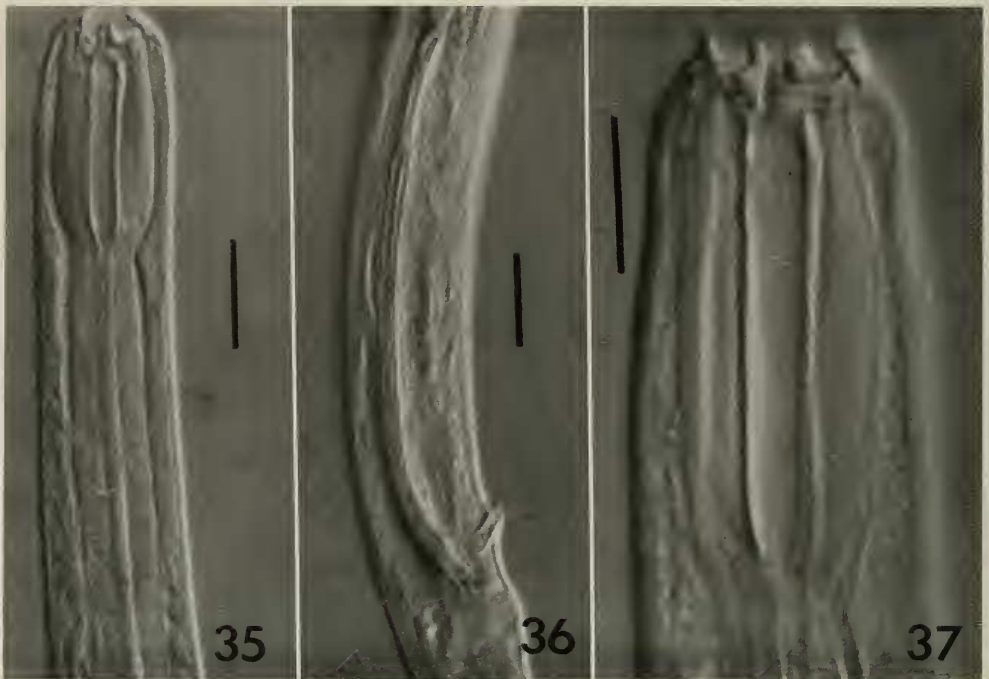
Figs. 22–28. *Ironella prismatolaima*: 22, Male, head, left lateral view; 23, Male, teeth, left lateral view; 24, Male, head, right lateral view; 25, Male, posterior end, lateral view; 26, Male, left spicule and supplement, lateral view; 27, Male, tip of right spicule and supplement, lateral view; 28, Female, tail, lateral view. Scales in μm .

specimen differed from the original description in the body length, relative length of cephalic setae and the length of the tail. The specimens described herein are very similar

to the original description and to that of Riemann (1966). They differ from that of Riemann (1966) in the length of the spicules (80–94 vs. 53.5) and in the demanian “a”



Figs. 29–34. *Thalassironus lynnae*: 29, Male, head, lateral view; 30, Male, spicule and gubernaculum, lateral view. Scale bars = 15 μ m. *Thalassironus britannicus*: 31, Male, head, lateral view; 32, Male, spicule and gubernaculum, lateral view. Scale bars = 15 μ m. *Thalassironus americanus*: 33, Male, head, lateral view; 34, Male, spicules and gubernaculum, lateral view. Scale bars = 15 μ m.



Figs. 35-37. *Ironella prismatolaima*: 35, Male, anterior end, lateral view; 36, Male, spicule and gubernaculum, lateral view. Scale bars = 15 μ m. 37, Male, head, lateral view. Scale bar = 20 μ m.

value (65.0-75.9 vs. 51). Timm (1952) described *I. cobbi* on the basis of a single female and mentions six long labial and six long cephalic setae but does not mention or figure additional cephalic setae. Therefore, the four cephalic setae of the posterior circle appear missing in *I. cobbi*. *Ironella* according to Cobb (1920) and Chitwood (1960) has ten cephalic setae in two circles of six and four. The single circle of six cephalic setae in *I. cobbi* would be unique for the genus. Therefore, *I. cobbi* should be regarded as a *species inquirenda* until the type specimen can be examined or other material becomes available.

Specimens.—Florida Nematode Collection, University of Florida, Gainesville, Florida, 1 female A-141 and 1 male A-142; and 2 males, USNM 77115, 77116 and 1 juvenile 77117.

Locality.—Six to eight miles off Sea Horse Key, Gulf of Mexico, off Levy County, Florida.

Acknowledgments

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