



Article

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A new species of *Scirtes* (Coleoptera: Scirtidae) from southern Florida and the Caribbean

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Abstract

A new species, *Scirtes goliai* Epler, is described from southern Florida, the Bahamas and the Cayman Islands. It is distinguished by its small size, oblong habitus, brown coloration, laminate prosternum and distinctive genitalia. The species appears to be associated with mangroves.

Introduction

The family Scirtidae (“marsh beetles”) has been relatively ignored in North America. Tetrault (1967) revised the family for America north of Mexico and described several new species of *Cyphon* Paykull, but his dissertation was never published; his names remain unavailable. Two of his *Cyphon* species were subsequently described (Klausnitzer 1976); Young and Stribling (1990) dealt with the *Cyphon collaris* complex and described a new species; and a new genus, *Herthania* Klausnitzer, 2006, has been established that includes at least four Nearctic species, some of which were formerly placed in *Cyphon* (Klausnitzer 2006; Zwick 2011). Other than that little has been done with the taxonomy of the family for the Nearctic.

The family is also poorly studied in Central and South America, where the works of Champion (1897a, 1897b, 1918) remain the most recent and best sources of information. Other Neotropical species have been described by Chevrolat (1870), Guérin-Méneville (1861) and Makhan (2007). The genitalia of most Western Hemisphere species have not been studied or described.

Scirtes Illiger is one of the largest genera in the family, with approximately 360 species described worldwide (Yoshitomi and Ruta 2010). Only four described species are recorded from North America: *S. oblongus* Guérin-Méneville, 1861 (see Epler 2009), *S. orbiculatus* (Fabricius, 1801), *S. plagiatus* Schaeffer, 1906, and *S. tibialis* Guérin-Méneville, 1843. Ruta (2009) placed *S. californicus* Motschulsky, 1845, as an alticine chrysomelid; Epler (2010) considered *S. ovalis* Blatchley, 1924, and *S. piceolus* Blatchley, 1924, to be junior synonyms of *S. tibialis*.

When gathering material for my most recent work on Florida’s water beetles (Epler 2010), I found several specimens of an undescribed *Scirtes* from southern Florida. A subsequent visit to the Florida State Collection of Arthropods and discussion with head curator Mike Thomas produced several more specimens of this taxon from the Bahamas and the Cayman Islands. This new species is described below.

Methods

The majority of material used was mounted on points. Three males from Florida, collected in alcohol, were dissected and all body parts slide-mounted in Euparal. The genitalia were dissected from two point-mounted females, following relaxation, and slide-mounted in Euparal. For measurements using three or more specimens, the range is given followed by the mean.

Collection acronyms: FSCA—Florida State Collection of Arthropods, Gainesville, Florida; JHE—JH Epler collection, Crawfordville, Florida.

Abbreviations used for measurements: HW—maximum width of head; HL—maximum length of head in frontal view; DBE—distance between eyes; PW—maximum width of pronotum; PL—maximum length of pronotum; EL—maximum length of elytra; EW—maximum width of both elytra; TL—maximum length of pronotum and elytra.

Scirtes goliai sp. nov.

Scirtes sp. 1 Epler 2010: 16.22, 16.23.

Diagnosis. The small size, oblong habitus, brown coloration, laminate prosternum and distinctive genitalia distinguish this species from any other described Western Hemisphere *Scirtes*.

Type material. Holotype: male, “CAYMAN: Grand Cayman, N 19°21.074, W 81°05.727, 4 June 2008, R. Turnbow”. Holotype deposited in FSCA.

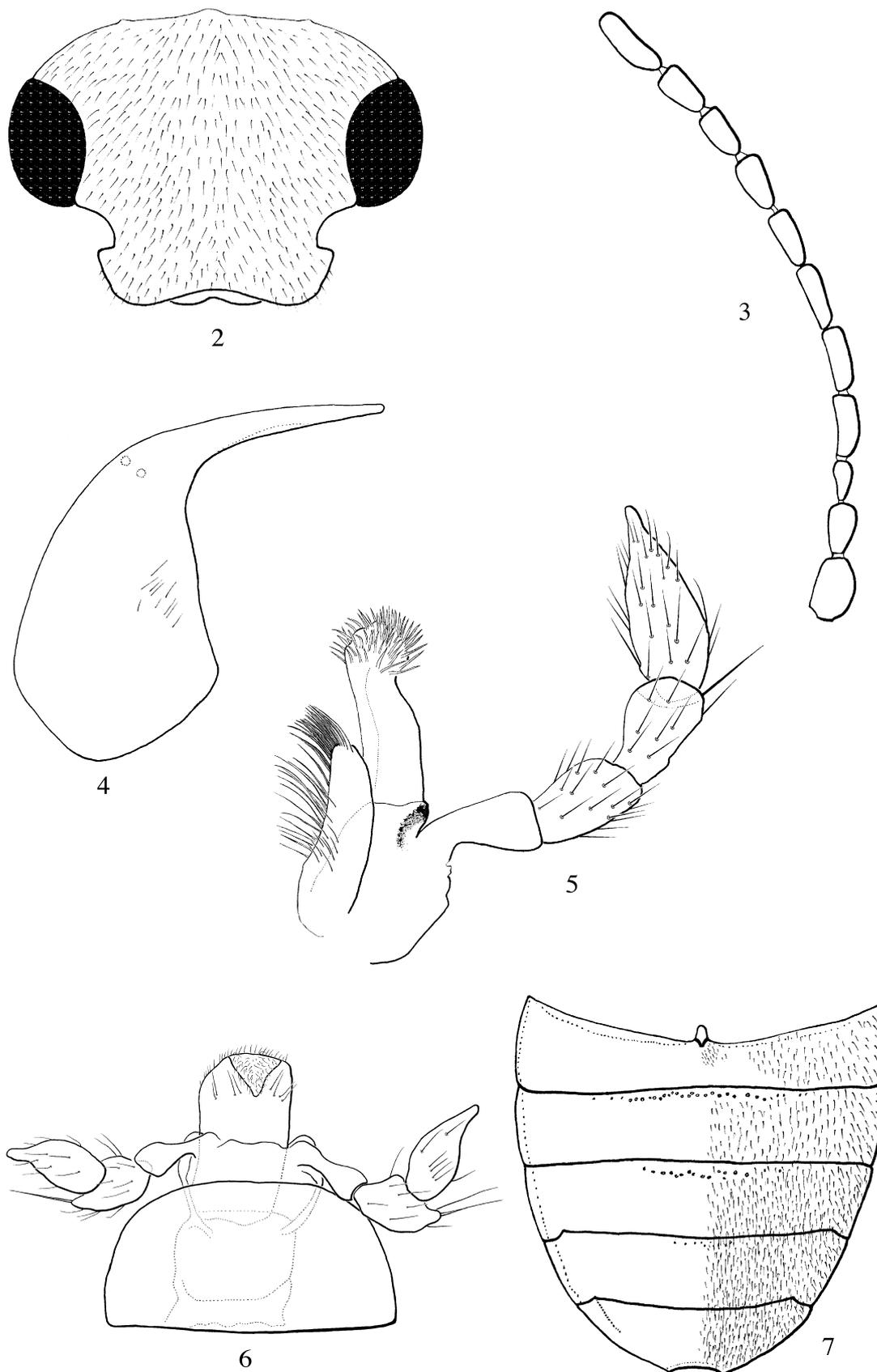
Paratypes: **BAHAMAS:** Andros Is. Behring Point, 24-vii-2006, M.C. Thomas, beating vegetation, 1 male (FSCA); Great Inagua, north coast road N21.10813, W 73.60196, 13-vii-2007, blacklight trap in mature mangrove forest, Thomas, Turnbow & Smith, 9 males (FSCA); Great Inagua, 2–3 mi. N Salt Pond Hill, 14-vii-2007, blacklight trap, Thomas, Turnbow & Smith, 2 males, 1 female (FSCA); Great Inagua, vic. Middle Point, blacklight trap in mangrove forest, 15-vii-2007, Thomas, Turnbow & Smith, 2 females (FSCA). **CAYMAN ISLANDS:** same data as holotype, 2 males (FSCA); Grand Cayman, Georgetown, 2 June 2008, R. Turnbow, 1 male (FSCA); Grand Cayman, BWI, West Bay, 17 Jan 1966, E.J. Gerberg, 1 male (FSCA); Grand Cayman Island, 10-ix-1989, P. Fitzgerald, blacklight trap, 1 female (FSCA); Grand Cayman, 14-ii-1992, black light trap, P. Fitzgerald 16235, 1 female [ventrites and genitalia slide mounted] (FSCA); Cayman Is., Grand Cayman, vi-1992, P. Fitzgerald, blacklight trap, 1 female [genitalia slide mounted] (FSCA). **U.S.A.:** Florida, Miami-Dade Co., Coral Gables, Matheson Hammock, “beating”, August 21, 2004, leg. V. Golia, 1 male (JHE); Miami-Dade Co., Coral Gables, Matheson Hammock, “night sweeping”, Aug 23 2007, leg. Vince Golia, 2 males [both dissected and slide mounted] (JHE); Monroe Co., Plantation Key, Route 1, June 20, 1984, “beating mangroves”, Vince Golia, 1 male (JHE); Monroe Co., unnamed salt pond at Roosevelt Blvd, N 24°33'10.04", W -81°45'34.56", UV pan trap, 13-vi-2009, leg. Dana R. Denson, 1 male [dissected and slide mounted] (JHE).

Description. Male. Body oblong, slightly convex dorsally, head, pronotum and elytra covered with pale suberect setae (Fig. 1); venter and legs mostly covered with pale setae that are shorter and sparser than dorsal setae. Coloration of body light to dark brown, pronotal margins sometimes lighter; antennomere 1 light brown, 2–3 stramineous, 4–11 light brown to brown; maxillary and labial palpi stramineous to light brown; venter and femora light brown to brown, with femoral apices paler; tibiae and tarsi light brown.

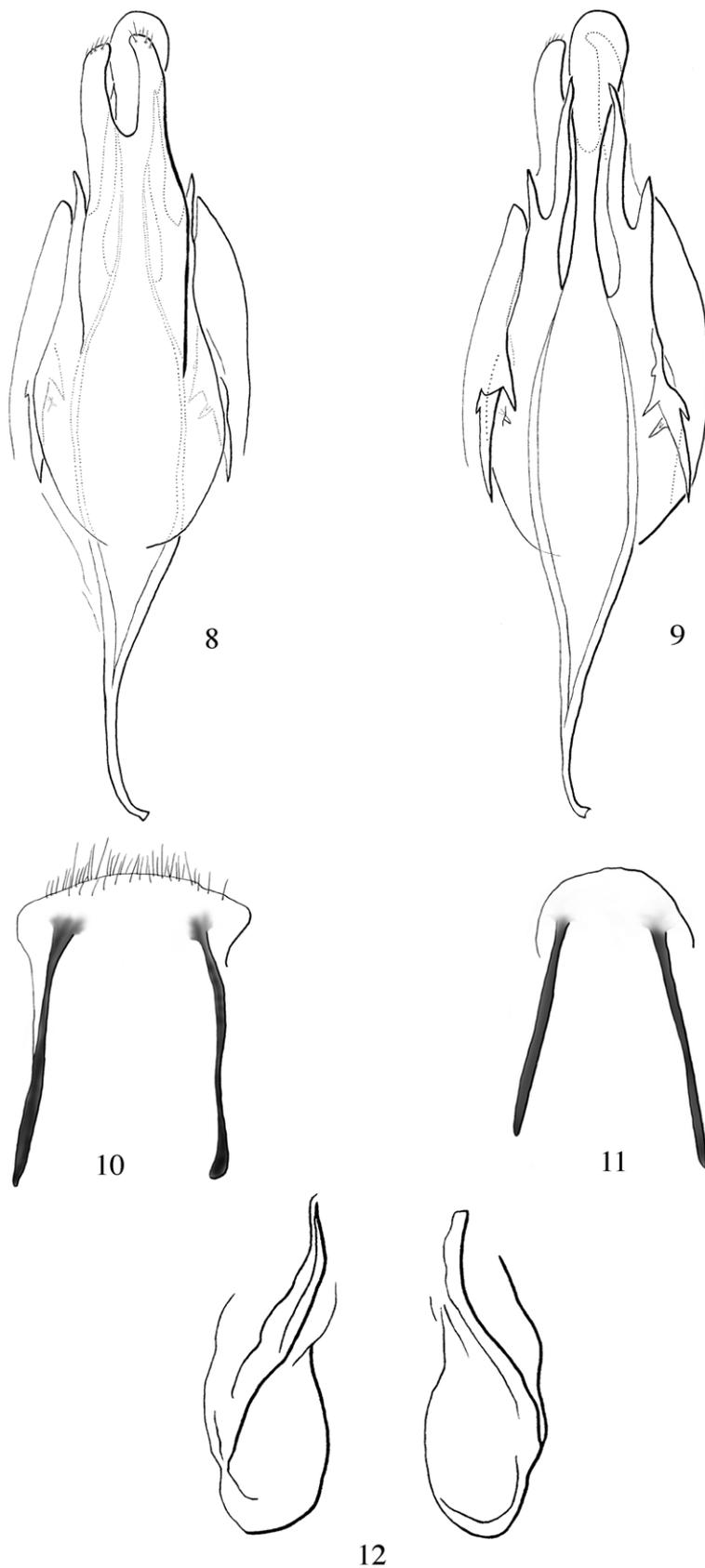
Measurements, in mm (n=5): HW 0.72–0.76, 0.73; HL 0.40–0.52, 0.49; DBE 0.42–0.46, 0.44; PW 1.02–1.10, 1.05; PL 0.44–0.50, 0.46; PW/PL 2.13–2.36, 2.26; EL 1.80–1.95, 1.86; EW 1.35–1.40, 1.36; EL/EW 1.30–1.41, 1.37; TL 2.19–2.45, 2.34. Ratio of length/width of antennomeres 1–11 (n=1): 2.17; 1.60; 2.67; 2.50; 2.50; 2.50; 2.50; 2.25; 2.25; 2.25; 3.00.



FIGURE 1. *Scirtes goliai* sp. nov., male habitus, Florida paratype.



FIGURES 2–7. *Scirtes goliai* sp. nov., male. 2) head; 3) antenna; 4) mandible; 5) maxilla, 6) labium; 7) sternites III–VII.



FIGURES 8–12. *Scirtes goliai* sp. nov., male and female genitalic structures. 8) aedeagus, ventral; 9) aedeagus, dorsal; 10) male, tergite VIII; 11) male, tergite IX; 12) prehensor.

Head (Fig. 2) with eyes of moderate size, distance between eyes about three times width of one eye; clypeus expanded laterally, emarginate anteromedially. Antennae (Fig. 3) extend to approximate proximal third of elytra, antennomere 3 much smaller than all other antennomeres. Mandibles (Fig. 4) symmetrical, without inner teeth/denticles, pointed apically; maxilla (Fig. 5) with elongate galea bearing brush of broader lamellate setae, lacinia with inner brush of setae; labial palpomeres 1 and 2 subequal, 2 arising at approximate middle of 1 (Fig. 6). Pronotum with anterior margin mostly straight medially, broadly U-shaped, curving out to anterior angle at approximately 40°, anterolateral and posterolateral angles approximately 90°; lateral margin gently curved, posterior margin very weakly bisinuate. Scutellum small, triangular, slightly wider (0.20 mm) than long (0.16 mm), punctation as on pronotum and elytra. Elytra oblong, with moderately developed humeri, anterior 1/3 of elytra moderately explanate. Hind tibial spurs well developed, slightly curved, with dorsal spur 2.5 times as long as ventral spur, about 0.06 as long as hind tarsomere 1. Prosternum lamellate, extending to or slightly past ventral margins of coxae. Ventrites II–VII (Fig. 7) setose, II with anteromedial area of shorter setae with bare area posterior and lateral to it, with longer setae lateral to bare area; setae sparser on II and III, more abundant and longer on IV–VIII; VII with shallowly emarginate posterior margin. Ventrites IV–VI with basal transverse row of setae with dark alveoli (visible only on slide mounted specimens), (n=3): IV with 28–39, 24; V with 15–31, 22; VI with 7–16, 12 darkened alveoli. Tergite VIII (Fig. 10) moderately sclerotized, with numerous setae on and before posterior margin, with well developed long apodemes; tergite IX (Fig. 11) weakly sclerotized, bearing only minute setae, with well developed long apodemes. Aedeagus symmetrical (Figs. 8, 9), tegmen and penis apparently connected, both well sclerotized; tegmen with anteriorly and posteriorly pointing spinous projections; penis with spatulate apex.

Female. Similar in habitus, vestiture and coloration to male.

Measurements, in mm (n=5): HW 0.62–2.072, 0.66; HL 0.38–0.48, 0.43; DBE 0.036–0.44, 0.40; PW 0.90–1.06, 0.97; PL 0.34–0.46, 0.396; PW/PL 2.30+2.72, 2.52; EL 1.70–2.05, 1.85; EW 1.25–1.40, 1.33; EL/EW 1.29–1.46, 1.39; TL 2.04–2.51, 2.24.

Ventrites IV–VI with basal transverse row of setae with dark alveoli (visible only on slide mounted specimens), (n=1): IV with 27; V with 13; VI with 6 darkened alveoli. Prehensor (Fig. 12) poorly sclerotized.

Etymology. The species is named for Mr. Vince Golia, Lake Worth, Florida, who collected some of the material and has made extensive material of Coleoptera and Heteroptera available to me. The name is a noun in the genitive case.

Remarks

As noted above, the Western Hemisphere Scirtidae have been little studied. Species groups have been suggested for *Scirtes* (see, for example, Yoshitomi & Ruta 2010), but to date no Western Hemisphere species have been placed into any of the proposed groups. *Scirtes goliai* seems to be most closely allied with the *S. flavoguttatus* group (ibid), but placement in any group at this time is premature, until more is known about the fauna of the Western Hemisphere.

Ventrites IV through VI each bear a basal, transverse row of setae with darkened alveoli (sockets from which setae appear to originate). These dark alveoli are found on the same ventrites in both sexes. They are not apparent on pinned specimens, but are readily seen if the ventrites are dissected and illuminated from beneath, either in alcohol or if mounted on a microscope slide.

Information from collection labels indicates that *S. goliai* may be associated with mangroves; the immature stages are unknown.

Acknowledgements

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