Pycnomerus thrinax, a new North America zopherid (Coleoptera)

Michael A. Ivie
Department of Entomology
Montana State University
Bozeman, MT 59717, USA
mivie@montana.edu

and

Stanislaw Adam Slipinski
CSIRO Division of Entomology
GPO Box 1700,
Canberra ACT 2601,
AUSTRALIA,
adam.slipinski@ento.csiro.au

Abstract. *Pycnomerus thrinax* Ivie and Slipinski NEW SPECIES is described from the Florida Keys (USA), where it is found in rotting stems of the thatch palm, *Thrinax parviflora* Sw. Illustrations and modifications to existing keys are provided.

Introduction

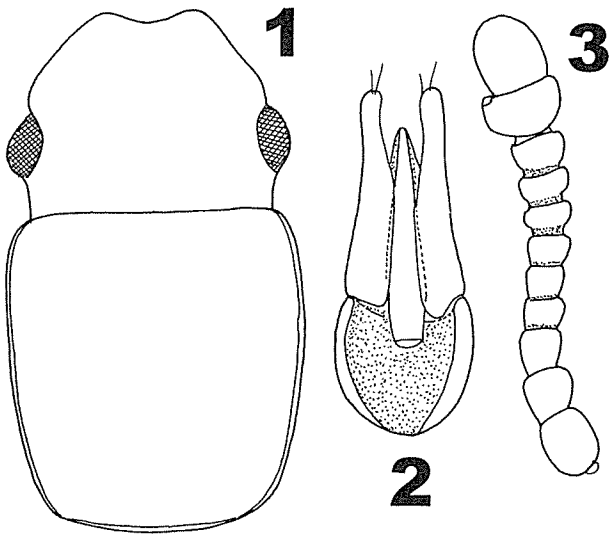
Slipinski and Lawrence (1999) established the relationship of the Pycnomerini, previously placed as a tribe of the Colydiidae (Ivie and Slipinski 1990), with the Zopherinae lineage of a reconstituted Zopheridae. *Pycnomerus* Erichson is the largest genus in the family Zopheridae (*sensu* Slipinski and Lawrence 1999), with many undescribed species in collections and the indication of many more to be discovered. No world revision is available for *Pycnomerus*, but in the last few decades regional reviews have been published for North America (Stephan 1989), the West Indies (Ivie and Slipinski 1989), the Palearctic (Dajoz 1977), Madagascar (Dajoz 1980), and the Juan Fernandez Islands (Pope 1955).

Specialized collecting by Robert Anderson and Stewart Peck in the Florida Keys (USA) has yielded an interesting and previously unknown member of the genus associated with the thatch palm, *Thrinax parviflora* Sw. Robert Anderson reports that the "adults were in the drier fibrous material in the dead, central stems of the fallen or hanging fronds of *Thrinax parviflora* Sw." (R. Anderson in lit.). Once the habitat was identified, large numbers were found, indicating it is abundant, if rarely seen. It is one of a growing number of extremely small *Pycnomerus* that all seem to live in dead palm fronds, including the Lesser Antillean and South American *P. infimus* Grouvelle, an undescribed species from Queensland [Australian National Collection of Insects, labeled "dead palm fronds of *Licuala ramsayi*"], one from Baja Verapaz, Guatemala [Canadian Museum of Nature, Ottawa], labeled "in dead tree fern fronds"] and another from the Seychelles [Museum National d'Histoire Naturelle, Paris]. Direct and indirect evidence indicates that there may be a potentially large circumtropical group of these tiny cryptic *Pycnomerus* associated with the decaying ribs of dead palm fronds. We describe this new species in order to have the name available before publication of the upcoming American Beetles, Volume II, and to call attention of this cryptic association for others able to investigate the fauna of dead palm fronds around the world.

Pycnomerus thrinax Ivie and Slipinski NEW SPECIES

Pycnomerus n. sp. Peck and Thomas 1998: 104.

TYPE MATERIAL. Holotype male labeled: FL: Monroe Co.; Key Vaca, Marathon; Crane Pt. Hammock; 17.v.90, 90-24; R. S. Anderson/ in dead frond; stalks *Thrinax*; *parviflora* Sw. [Canadian Museum of Nature]. **Paratypes:** 62 — same data as holotype. 22 — U.S.A.: Florida, 90-127; Monroe Co., Key



Figs. 1-3) *Pycnomerus thirax* Ivie and Slipinski. 1) dorsal view, head and prothorax; 2) male genitalia; 3) antenna .

Vaca; 1 mi N. Key Colony Beach; 21.X.1990, R. S. Anderson/ in dead frond; *Thrinax parviflora* Sw. 3 — FLA: Monroe Co; Vaca Key, Marathon; 2.VI-1.IX.86, Sec 1; S & J Peck, hammock; malaise - FIT86-46. 2 — FLA: Monroe Co; Fat Deer Key; 2,VIII-16.XI,85, S & J Peck; hardwood hammock; malaise-FIT. 1 — FLA: Monroe Co; Fat Deer Key; 24.II-4.VI.86; S & J Peck,86-23; hammock; malaise-FIT. 6 — FLA: Monroe Co; Fat Deer Key; 4.VI-28.VIII.86; S & J Peck,86-24; hammock; malaise-FIT. 3 — FLA: Monroe Co; Fat Deer Key; 31.VIII-15.XII.86; S & J Peck,86-88; hammock; malaise-FIT. 1 — FLA: Monroe Co; Fat Deer Key, S & J Peck; 18.XI.85-28.II.86; hammock; malaise-FIT. Paratypes are deposited in the Australian National Insect Collection (Canberra), Canadian Museum of Nature (Ottawa), Florida State Collection of Arthropods (Gainesville), Montana State University (Bozeman), National Museum of Natural History (Washington), Museum National d'Histoire Naturelle (Paris), Muzeum i Instytut Zoologii (Warsaw), Natural History Museum (London), and University of Kansas Natural History Museum (Lawrence).

Diagnosis. The very small size and flat, ungrooved pronotum distinguish this species from other North American species. From *P. infimus* it can be distinguished by the very distinct and coarse pronotal punctation (Fig. 4), and the lack of any hint of the longitudinal wrinkling so characteristic of *P. infimus* (Fig. 5). The most similar species we have seen to date is an undescribed species from Queensland, Australia, but that species has much sparser and larger punctures on the venter. From both these, it can be distinguished by the lateral bulge of the elytra over the hind part of the metasternum. Further, the distinctive male genitalia will confirm this species

In Stephan's key to North American *Pycnomerus*, *P. thrinax* will key to couplet 3, where it will seem to fit *P. reflexus* (Say). Couplet 3' should lead to 3a as follows:

3a. Length 3-4 mm, body subcylindrical, pronotum convex ..... *P. reflexus* (Say)

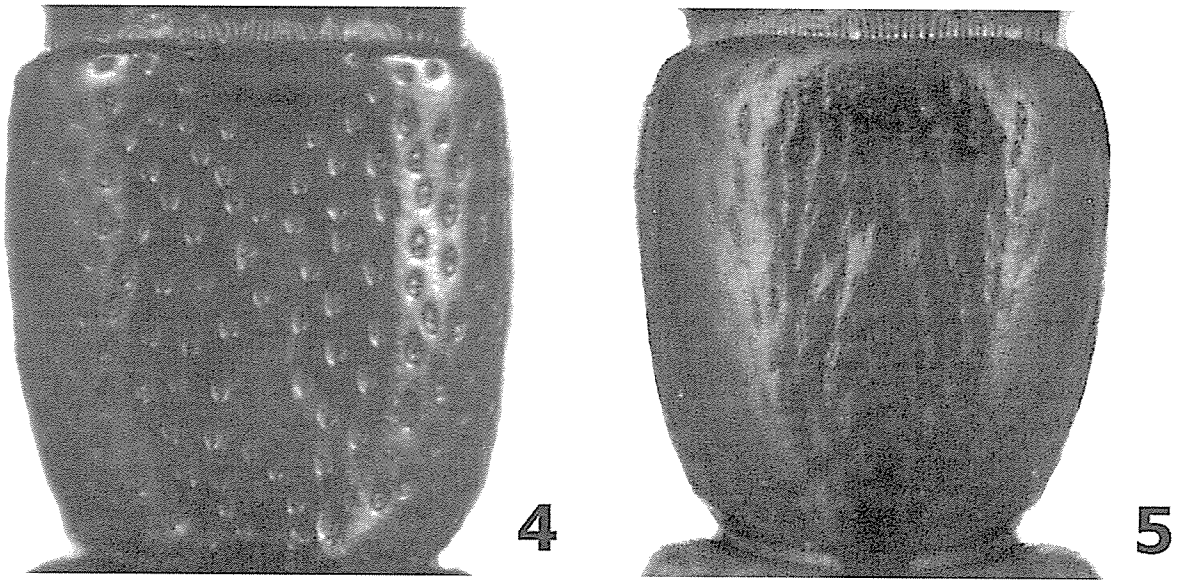
3a'. Length 2.3-2.8 mm, body dorso-ventrally flattened, pronotum flat ..... *P. thrinax* Ivie and Slipinski

Pycnomerus thrinax will key to *P. infimus* in Ivie and Slipinski's (1989) key to West Indian species. Because of the good chance this species may be found across the Straits of Florida in Cuba or the Bahamas, we provide the following additions for that key: choice 7' should lead to couplet 8, as follows:

8. Pronotum longitudinally wrinkled, punctures elongate; elytra parallel-sided ..... *P. infimus* Grouvelle

8'. Pronotum without trace of longitudinal wrinkles, punctures round; elytra laterally expanded above hind portion of metasternum ..... *P. thrinax* Ivie and Slipinski

Description. Male: Light reddish-brown. Elongate, parallel-sided except for distinct laterad bulge of elytra above posterior 1/2 of metasternum. Fully winged. **Head** (Fig. 1) with surface simply punctate, flat; anterior margin deeply emarginate, frontal angles distinct; frons with slightly indicated depressions mediad of antennal insertions. Antenna (Fig. 3) short, with distinctly 2-segmented club, antennomere 11 slightly narrower and longer than 10. Eye normal sized; antennal groove very short. Submentum lacking ciliate fovea. **Pronotum** (Fig. 1, 4) slightly longer than broad; sides weakly converging to base from just behind frontal angles; lateral margins smooth, very fine, without accompanying punctures; anterior angles narrowly rounded; posterior angles rounded, nearly obsolete; anterior margin straight, unmodified; posterior margin arcuate, finely grooved. Disc flat, glossy, coarsely, simply, punctate (in some individuals narrowly impunctate medially, subserially punctate to each side of this area). Prosternum flat, finely punctate, unmodified. **Elytra** nearly 3.0X as long as wide, flat, sinuate laterally at level of hind part of metaster-



Figs. 4-5. Pronotum. 4. *Pycnomerus thirax* Ivie and Slipinski; 5. *Pycnomerus infimus* Grouvelle.

num; anterior margin not bordered; striae narrow, uniform, finely and regularly punctate; interstriae flat, glossy. **Abdomen** coarsely punctate, last ventrite flat. **Genitalia** as in Fig. 2.

Female: no external differences were noted.

Length 2.3 - 2.8 mm.

Etymology. The species name is derived from the generic name of the thatch palm *Thrinax parviflora* Sw. (Palmacae).

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