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New Records for Stink Bugs in Virginia (Heteroptera: Scutelleridae, Pentatomidae)

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Three decades have passed since publication of my survey (1971) of the pentatomoid Heteroptera in "The Insects of Virginia" series, during which time our knowledge of these insects has been substantially increased. Six species were added to the state list, and a number of recent name changes noted some years ago (Hoffman, 1994); it is now desirable to present a sequel that adds still another pentatomid to our fauna and provides significant distributional records for several others.

The occasion is taken to offer a key to the Virginia genera of the subfamily Asopinae, not recognized in my 1971 treatment, and another to our species of *Podisus* which accommodates the additional member of this genus here documented as native to the state.

Unless otherwise specified, the material mentioned herein is located in the Virginia Museum of Natural History (VMNH), which is under ongoing obligation to the staff of the Division of Natural Heritage, Virginia Department of Conservation and Recreation, for donation

- through the interest of Steven M. Roble - of valuable material obtained during its inventory activities around the state. The classification and nomenclature follows that of Froeschner (1988), except as specifically noted.

FAMILY SCUTELLERIDAE

***Camirus porosus* (Germar)**

Although this northern member of a mostly Neotropical genus is virtually continent-wide in North America, actual capture records are rare and only a few states can claim *C. porosus* as a native resident. A collection from beach drift at Virginia Beach (Jones, 1935) provided the northernmost locality in eastern United States, and this tenuous evidence has to my knowledge never subsequently been verified. There is always some ambiguity about the origin of any beach drift finds, there being usually no way to know from what locality a specimen actually entered the water.

It is now possible to document an unequivocal Virginia locality for this very rare species: *Nottoway Co.*: Fort Pickett Military Reservation, 1.6 mi. E jct. Wilcox and Range roads, 7 July 1999, Anne C. Chazal and Amber K. Foster, VDNH survey (1). In addition to providing the new northernmost known locality for *C. porosus*, this site is of interest for its inland position on the Virginia Piedmont rather than in the Coastal Plain as might have been expected.

At first glance, *C. porosus* bears a considerable resemblance in size, shape, and coloration to species of the genus *Galgupha*, except that the integument is matte instead of shiny. A good dorsal habitus illustration was published by Froeschner (1988), but it does not indicate the coarse, dense punctation of the entire body. As seen with magnification, the bug has an unprepossessing facies with its dull black coloration, small eyes, and large, declivous head which is retracted up to the eyes in the prothorax (Figs. 1A, 1B). An interesting feature is the accommodation of the long antennae in the deep, narrow, prothoracic rostral groove from which, in the preserved specimen, they had to be extracted with a fine needle. This groove, formed by the laminate expansion of the front edge of the propleura (Fig. 1B, ppf), becomes so constricted between the procoxae that the corresponding segment of the rostrum is notably narrowed in order to fit into the narrow sinus.

I am unaware of any illustration of the forewing for this species and provide a sketch (Fig. 1C) that shows the reduced venation and distribution of color. The striking white costal region is not mentioned in descriptions available to me, and in fact is invisible when the wings are withdrawn beneath the scutellum.

As in related scutellerid genera, *Camirus* has subquadrate paramedian stridulatory areas on ventral segments 4 and 5, but they are almost invisible unless the specimen is turned into the correct inclination *vis-à-vis* a light source, when they are seen to consist of prominent long parallel striae. I could detect no corresponding plectral surfaces on the inner side of the metafemora aside from a few random subapical vertical striae which do not seem correctly placed to rub against the stridultral surface.

FAMILY PENTATOMIDAE

Subfamily Pentatominae

Proxys punctulatus (Palisot de Beauvois)

At the time of preparing my 1971 treatment, I had seen material of this striking black and yellow species only from a few specimens taken in the cities of Richmond, Suffolk, Chesapeake, and Norfolk. From these localities I concluded the species observed the classical "Lower

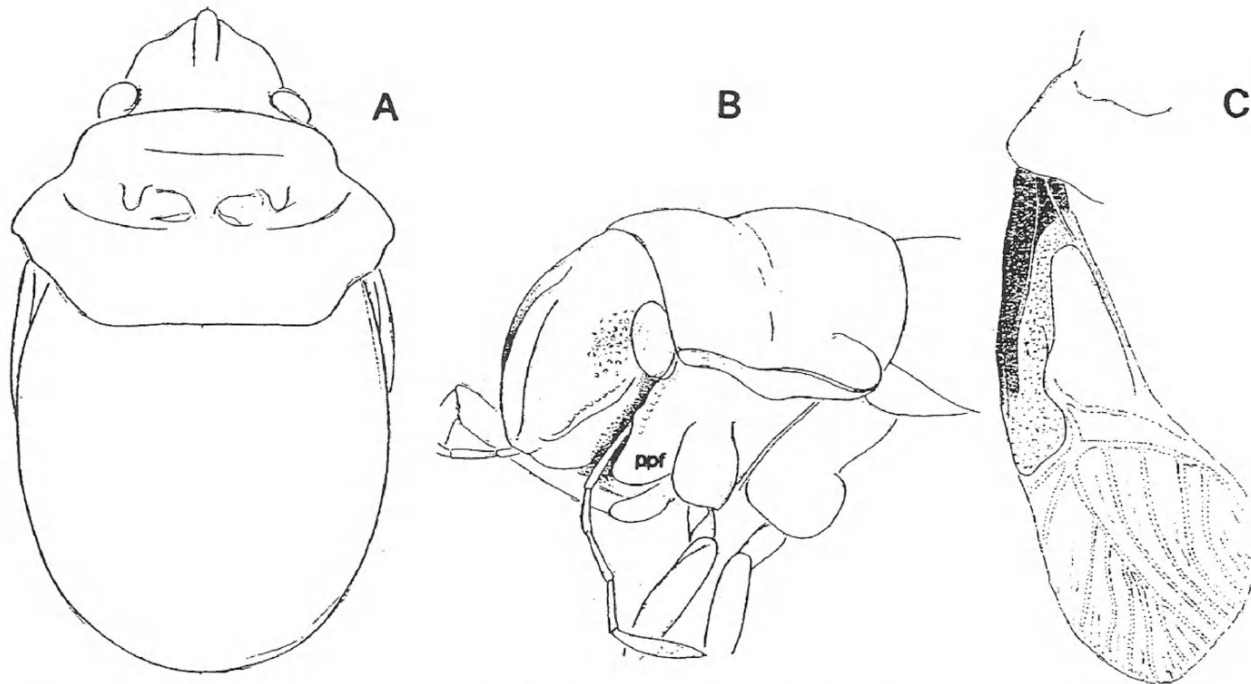


Fig. 1. *Camirus porosus*. A. Outline of body in dorsal aspect; B. Anterolateral aspect of forebody, showing deep insertion of the head into the prothorax and concealment of antennal socket under propleural flange (ppf); C. Left forewing. Heavily stippled area is dull black, lightly stippled area is ivory-white, unstippled areas are clear membrane, the veins are indicated somewhat more evidently than in actuality.

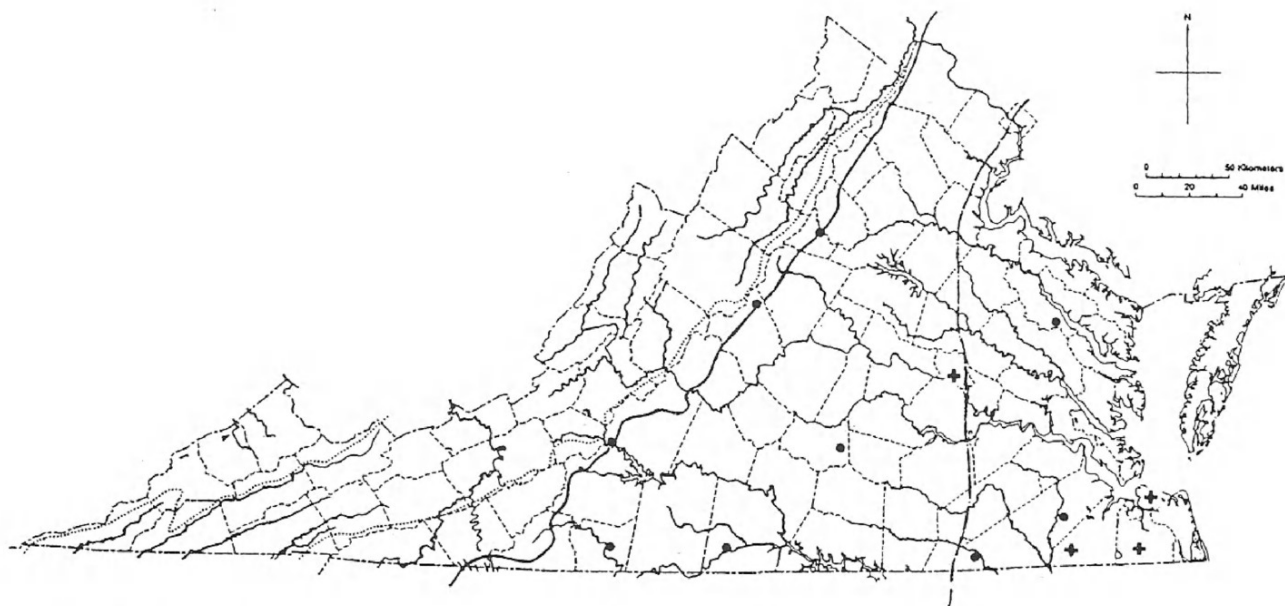


Fig. 2. Distribution of *Proxys punctulatus* in Virginia. Previously published records indicated by the plus symbols, new records by dots. Dashed line approximates the eastern edge of the Fall Line; solid line the eastern edge of the Blue Ridge.

Austral" distribution and was probably confined to the Coastal Plain in Virginia. Material subsequently acquired by VMNH demonstrates a distinctly greater range: essentially everywhere east of the Blue Ridge. New localities are in Essex, Greene, Greensville, Halifax, Henry, Isle of Wight, Nelson, Nottoway, and Roanoke counties and justify preparation of a new state range map (Fig. 2) for this species.

The westernmost capture sites correspond closely to a line drawn along the base of the Blue Ridge: *Greene Co.*: Conway River at Va. 230, 23 August 1980, RLH (1). *Nelson Co.*: Afton, 21 July 1973, J. Gainer (1). *Roanoke Co.*: Roanoke River at crossing of Blue Ridge Parkway, 29 June 1975, S. W. Bullington (1).

Although the species is attracted to UV light, specimens appear singly or in very small numbers, e.g., two from Greensville County on 15 July 1994. We have three specimens from Essex County taken in extensive Malaise trapping over a period of several seasons, an extremely low return considering the total trap effort of hundreds of hours.

Subfamily Asopinae

My 1971 treatment of Virginia pentatomoids did not admit this taxon at either the tribal or subfamilial level despite its treatment as a subfamily by Blatchley (1926) and other authorities. I herewith atone for that neglect by recognizing the Asopinae in the sense of Thomas (1992), who revised the asopine fauna of the Western Hemisphere

and introduced a considerable number of nomenclatorial changes which I now review in order to update the names used in my 1971 accounts.

Blatchley (1926: 93) distinguished the Asopinae from nominate Pentatominae by structure of the bucculae, long and parallel in the latter, almost entirely enveloping the slender basal segment of the rostrum, against short and convergent, enclosing only the basal half of the short, thick basal rostral segment in asopines. Thomas (1992: 8) was unable to define tribal groups among the 27 New World genera that he recognized despite a diversity of structural features. Five of these genera are represented in the Virginia fauna and can be distinguished as follows:

KEY TO THE VIRGINIA GENERA OF ASOPINAE

1. Scutellum broad and ovoid, covering inner angles of hemelytral coria and base of membrane, the apex broadly rounded.....*Stiretrus*
– Scutellum subtriangular, distally acuminate, not covering hemelytra.....2
2. Rostrum very long, extending back to 2nd abdominal segment; pronotal humeri produced into blunt digitiform projection; color bluish-black with pronotum and scutellum variously ornamented with red markings.....*Euthyrhynchus*
– Rostrum shorter, not extending beyond posterior coxae; humeri, if produced, acute or spinose; color not dark blue and red.....3

3. 4th segment of rostrum about twice as long as 3rd;
color black and orange.....*Perillus*
– 4th segment of rostrum about equal to 3rd; color
yellowish to brownish.....4
4. Jugae slightly longer than tylus; body length greater
than 12 mm.....*Apoecilus*
– Jugae and tylus equal in length; body less than
12 mm long.....*Podisus*

***Euthyrhynchus floridanus* (Linnaeus)**

In 1971 I cited material from Appomattox, Gloucester, and Southampton counties, and the cities of Suffolk, Norfolk, and Newport News. Specimens at VMNH add Isle of Wight County and the cities of Hampton, Richmond, and Virginia Beach. A specimen from Kiptopeke State Park, at the southern end of Northampton County (S.M. Roble, 6 October 1996) establishes the species on the “Eastern Shore” and one from Grey’s Point, Middlesex County (J. Carnes, 29 October 1955) extends the Virginia range slightly northward to the Rappahannock River.

***Apoecilus cynicus* (Say)**

Thomas (1992: 25) elevated *Apoecilus* from subgeneric to generic rank, in the process incidentally removing the generic name *Apateticus* from the local fauna. As *Apateticus cynicus* I reported this large and conspicuous species from Burkes Garden, Tazewell County, its only then-known Virginia locality.

Recently collected VMNH specimens now represent the counties of Alleghany, Augusta, Bath, Bedford, Craig, and Dickenson, from sites on or west of the Blue Ridge. Robert Vigneault obtained eight specimens, mostly at lights, at Breaks Interstate Park, Dickenson County, during the first two weeks of July 2000.

***Podisus brevispinus* Thomas**

The specific name *modestus*, by which this insect was known for many decades, was determined by Thomas (1992: 93) to have been based upon a specimen of *P. maculiventris* (Say), thus requiring the proposal of the new name *brevispinus* for the present species. As *Podisus modestus* I recorded it (1971: 58) from only a few specimens captured in Montgomery and Grayson counties. Recently acquired material originated in Augusta, Bath, Botetourt, Dickenson, Floyd, Giles, Highland, Nelson, Rockingham, Smyth, Tazewell, and Washington counties, from sites on or west of the Blue Ridge and nearly all above 3000 ft. elevation.

***Podisus placidus* Uhler**

New state record, new southernmost locality

A boreal species stated by Blatchley to have been “...not recorded south of New Jersey.” Localities cited by Froeschner (1988: 556) define a range from Quebec to Alberta and Utah, again with nothing south of New Jersey and Ohio. VMNH has a single female collected by Malaise trap in *Clarke Co.*: Blandy Experimental Farm, 3 mi. S Boyce (D. R. Smith, 2 July 1991), which adds the species to the state list of insects, and constitutes a considerable southward extension of the known range. Whether this specimen derived from a native population, or was introduced via shrubbery (Blandy Farm hosts a variety of exotic cultivars) remains to be determined by future collections in Virginia and neighboring states.

The combination of straight pronotal margins, immaculate legs and membrane, and extensive random brown blotching of the dorsum readily distinguish this species from other local members of the genus.

***Podisus neglectus* (Westwood)**

Based on a single female without indication of origin, this species fell into an obscurity that was a credit to its name. The type specimen was apparently not restudied by a pentatomid specialist until Thomas found it in the British Museum collection and recognized the species as that described much later as *P. fretus* (Olsen, 1916) from specimens taken in Massachusetts. Ranging from Maine to Florida along the seacoast, with disjunct populations in the Great Lakes region; the species appears to be uncommon in Virginia as no specimens have been taken here since I reported two specimens (USNM) from Virginia Beach. Since there has been no dearth of collecting activities in the two “Eastern Shore” counties and extreme southeastern Virginia by staff of the Division of Natural Heritage, perhaps some special collecting techniques are required to obtain specimens of *P. neglectus*. That an actual hiatus in the range may occur, however, is suggested by the apparently analogous case of another coastal pentatomid, *Thyanta custator* (Fabricius), of which no specimens have been taken between New Jersey and North Carolina.

***Podisus serieventris* Uhler**

Known states of record for this species clearly reflect a northern, subboreal distribution from Newfoundland to British Columbia, and southward to North Carolina and Utah. Curiously, the only Virginia records I could cite in 1971 were for Arlington and Fairfax counties, in the Piedmont rather than the mountains, an anomaly paralleled by the localities then known for North Carolina.

Since 1971, a few captures have been made in the Virginia mountains: *Dickenson Co.*: Breaks Interstate Park, 1-14 July 2000, Robert Vigneault (6), and *Highland Co.*: Locust Spring Recreation Area, George Washington National Forest, 29 April 1972, R. L. and L. S. Hoffman (1). Collectively, these do not add up to a very adequate picture of the in-state distribution.

The addition of *P. placidus* to the state fauna and the several name changes mentioned above require revision of the key that I prepared in 1971.

KEY TO THE VIRGINIA SPECIES OF *PODISUS*

1. Dorsolateral margin of pronotum straight; legs and membrane immaculate; dorsum mostly pale beige mottled with irregular brown blotches.....*P. placidus*
- Dorsolateral margin of pronotum concave or indented near midlength; membrane with median stripe; dorsum colored otherwise.....2
2. Legs immaculate yellow; median projection of 2nd ventral segment short, not extending between metacoxae; body length less than 10 mm.....*P. brevispinus*
- Legs variously marked with spots or annulations; median projection of 2nd ventral segment longer, usually extending between bases of metacoxae; length greater than 10 mm.....3
3. Femora of all legs with two black subapical spots.....*P. maculiventris*
- Femora variously marked but never with two subapical dark spots.....4
4. Antennae uniformly light reddish-brown; midventral abdominal spots large (size of an eye, or larger) and poorly-defined.....*P. neglectus*
- 3rd and 4th antennomeres distinctly darker than basal; midventral abdominal spots small and sharply defined.....*P. serieiventris*

SUMMARY

The 84 species of Pentatomoidea now known to occur in Virginia are distributed among four families as follows:

Scutelleridae	8
Cydnidae	14
Corimelaenidae	11
Pentatomidae	51

The proximity of capture sites for other species in adjoining states suggests that this total may increase to about 90 through continued collecting efforts.

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