REVIEW OF *REUTERIA* PUTON 1875, WITH DESCRIPTIONS OF TWO NEW SPECIES (HEMIPTERA: MIRIDAE)[1]

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ABSTRACT: Redescriptions and figures of the male genitalia and tergal processes are given for six of the seven species of *Reuteria: bifurcata* Knight, *fuscicornis* Knight, *irrorata* (Say), *marqueti* Puton, *platani* Knight and *querci* Knight. The new species, *dobsoni* from Pennsylvania and *wheeleri* from Georgia and North Carolina, are described and illustrated, and a neotype is designated for *irrorata*. A key to the species and complete synonymies are provided for *irrorata* and *marqueti*. Information on host plants and distributions are given for each species.

DESCRIPTORS: Hemiptera, Miridae, *Reuteria*, review, key, new species, *dobsoni*, *wheeleri*.

The genus *Reuteria* belongs to the subfamily Orthotylinae and the tribe Orthotylini (Carvalho 1958). Puton (1875) erected the monobasic genus *Reuteria* using the Palearctic *marqueti* as the type-species. Reuter (1883) transferred *Capsus irroratus* Say, 1832 to *Reuteria* and placed *marqueti* as a junior synonym of *irrorata*. Most subsequent authors followed this interpretation until Knight (1922) noted that the genital claspers of *irrorata* and *marqueti* are not identical. In 1939 Knight described *bifurcata*, *fuscicornis*, *querci*, and *pollicaris* and again noted that *marqueti* is different from Nearctic *Reuteria*. Knight (1941) described *platani* and provided a key to the North American species and Froeschner (1949) gave a key to the 5 Nearctic species known from Missouri and neighboring states. Wagner (1957) still considered *marqueti* a synonym of *irrorata*, and Carvalho (1958) listed only 6 species in his "Catalog of the Miridae of the World." Later, Wagner (1961, 1967) gave *marqueti* specific rank, raising the number of *Reuteria* to seven.

In this paper six of the seven previously known species of *Reuteria* are redescribed, a neotype is designated for *irrorata*, and two new species are described. A key to the species, modified from Knight (1941), is presented. The host plants and distribution are given for each species; the 1st and 2nd antennal segments of 4 species and the male genitalia and tergal processes for 8 of the 9 species are illustrated. The original citations have been listed for each species. Other citations are referred to the Carvalho catalog (1960), except those not included in the catalog or where there has been confusion in synonymy.

The following abbreviations are for institutions cited in this paper:

AMNH American Museum of Natural History, New York, New York

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[2] Bureau of Plant Industry, Pennsylvania Department of Agriculture, Harrisburg, Pennsylvania 17120

BM	British Museum (Natural History), London, England
CU	Cornell University, Ithaca, New York
LSU	Louisiana State University, Baton Rouge, Louisiana
MCZ	Museum of Comparative Zoology, Harvard University, Cambridge, Massachusetts
NMNH	National Museum of Natural History, Washington, D.C.
PDA	Bureau of Plant Industry, Pennsylvania Department of Agriculture, Harrisburg, Pennsylvania
PSU	Pennsylvania State University, University Park, Pennsylvania
PU	Purdue University, West Lafayette, Indiana
TJH	T.J. Henry collection
UW	University of Wisconsin, Madison, Wisconsin
ZMHU	Zoologisches Museum der Humboldt-Universität, Berlin, DDR-East Germany

Morphological Notes

Knight (1939) was the first to utilize male genitalia to delimit species of *Reuteria.* The male genital claspers of known species have been figured (Knight 1939, 1941; Seidenstücker 1954; Kelton 1959; Wagner 1973) except *platani* Knight, which was described from 2 females. Both right and left claspers are distinctive for each species.

The spiculi of the aedeagus are also quite characteristic. Kelton (1959) figured those of *fuscicornis* and noted that the genus belonged to a taxon having 2 or more spiculi. I have found that they range in number from 2 in *irrorata* to 4 in *marqueti.* The spiculi of *Reuteria* may be straight, spatulate and margined with fine serrations, or slender, curved, or forked. The forked spiculi may be twisted around other spiculi or may be slender and clothed with fine setae that give a feathered appearance.

Another distinguishing character not previously associated with *Reuteria* is the uniquely formed tergal process. Knight mentioned tergal processes in the Orthotylinae when he described species of *Lopidea* (1962), *Ilnacora* (1963), and *Melanotrichus* (1968). He also used them in erecting the genus *Hesperocapsus* (1968), and Knight and Schaffner (1968, 1972) used them in describing additional species of *Lopidea.* In *Reuteria* these structures are formed on the posterior margin of the last abdominal tergite, just left of the median line.

Genus *Reuteria* Puton, 1875:519

Type-species: *Reuteria marqueti* Puton 1875:519.

Diagnosis: Mirids with narrow black lines on each side of the 1st antennal segment which connect ventrally at the apex; small (3.7 – 4.7 mm), fragile, white and tinged with green, often marked with blotches of green on the dorsum and femora, but the blotches may vary from none to many within a species; dorsum clothed with simple white or silvery pubescence; claws characterized by convergent parempodia.

Key to the Species of *Reuteria*

1. First antennal segment with inner black line indistinct on basal half; transverse apical portion and outer black line combined to form a letter J (Fig. 3). . . . *platani* Knight

First antennal segment with inner black line complete to base 2

2. Second antennal segment with a broad fuscous to black area occupying basal half to three-fourths of segment . . . . . *fuscicornis* Knight

Second antennal segment pale, a black annulus at base; at most the black color not occupying more than basal one-fourth of segment 3

3. Second antennal segment with a rather broad fuscous area at base, length greater than diameter of first segment (Fig. 4) . . . . . *querci* Knight

Second antennal segment with a narrow black annulus at base, length subequal to diameter of first segment (Fig. 2) 4

4. Corium and clavus conspicuously marked with green blotches 5

Corium and clavus with a few or no green blotches 7

5. Larger species, 4.49 – 4.60 mm; dorsal aspect of hind femora mostly without large green blotches, usually replaced with a brown or fuscous line at apex; rostrum reaching middle of metacoxae; Palearctic . . . . . *marqueti* Puton

Smaller species, 4.00–4.40 mm; dorsal aspect of hind femora with 3 or 4 large green blotches; rostrum reaching middle of mesocoxae; Nearctic 6

6. Left arm of right clasper long, slender, curved upward; tergal process slender with lateral branch spine-like (Fig. 12) . . . . . *wheeleri* n. sp.

Left arm of right clasper short and stout; tergal process short, stout, without spine-like lateral branch . . . . . *irrorata* (Say)

7. Membrane without fuscous mark bordering large areole; veins pale; tergal process slender and curved (Fig. 5) . . . . . *bifurcata* Knight

Membrane with a sharply defined fuscous mark bordering large areole; veins green; tergal process stout and straight 8

8. Larger species, 4.40–4.60 mm; membrane opaque white; hind femora with large green blotches on dorsal aspect; tergal process pointed at apex (Fig. 6) *dobsoni* n. sp.

Smaller species, 3.9 mm; membrane clear; hind femora without large green blotches on dorsal aspect; tergal process truncate at apex . . . . . *pollicaris* Knight

Reuteria bifurcata Knight

Reuteria bifurcata Knight 1939:130; Carvalho 1958:129; Akingbohungbe et al. 1972:12.

Malacocoris irroratus, Wirtner 1904:201[3]

Male: length 4.80 mm, width 1.60 mm. **Dorsum:** pale to white; clothed with simple white or silvery pubescence. **Head:** width 0.75 mm, vertex 0.36 mm. **Rostrum:** length

[3] I have examined Wirtner's specimens of *Reuteria,* including several taken July 31, at Greensburg, as listed in his 1904 paper, and all are *bifurcata.*

1.30 mm, reaching middle of intermediate coxae. **Antennae:** I, length 0.44 mm; II, 1.69 mm, a narrow black annulus at base; III, 1.21 mm; IV, 0.69 mm. **Pronotum:** length 0.62 mm, width at base 1.25 mm. **Hemelytra:** translucent white, with a green spot at apex of embolium and cuneus. **Membrane:** translucent white; veins pale. **Legs:** pale; knees black; hind femora sometimes with a few small green blotches on dorsal aspect. **Genitalia:** fig. 5.

Female: length 4.56 mm, width 1.65 mm. **Head:** width 0.74 mm, vertex 0.40 mm. **Rostrum:** 1.34 mm. **Antennae:** I, 0.44 mm; II, 1.62 mm; III, 1.10 mm; IV, 0.68 mm. **Pronotum:** length 0.58 mm, width at base 1.20 mm. Similar to male in color, markings and pubescence.

Distribution: Ill., Md., N.Y., Okla. (Knight 1941); Mo. (Froeschner 1949).

Specimens Examined – ILLINOIS: 1♂, Rockford, July 5, 1932, Dozier and Mohr (AMNH). NEW YORK: 1♂, Hempstead, Long Island, VII-21-09, C.E. Olsen (AMNH). NORTH CAROLINA: 1♂, Mecklenburg Co., Rt. 51, 1 mi. W. of Rt. 16, nr. Matthews, June 14, 1974, A.G. Wheeler, Jr., on *Carya ovata* (PDA). PENNSYLVANIA: 2♀♀, Greensburg, July 5, 1903 (?) O. Heidemann (Allotype) (CU); Greensburg, 1♀, July 31, 1903, Wirtner (Det. H.H. Knight) (CU); 1♂, Cumberland Co., Camp Hill, Wood St., July 16, 1973, T.J. Henry and A.G. Wheeler, Jr., on *Platanus occidentalis;* 3♂♂, 6♀♀, Butler Co., 7 mi. W. of Butler, Rt. 422, July 24, 1973, A.G. Wheeler, Jr., on *Carya laciniosa;* 1♂, Lehigh Co., Allentown, Lehigh Park, July 24, 1973, K.R. Valley, on *Salix babylonica;* 1♂, Northampton Co., Hwy. 191, 1.5 mi. S. of Nazareth nr. Jackson Sch. Bldg., July 26, 1973, K.R. Valley, on *Carya ovata;* 1♂, Chester Co., nr. Seven Stars, Doyle Nurs., T.J. Henry and A.G. Wheeler, Jr., on *Juglans* sp. (PDA).

Remarks: *R. bifurcata* superficially resembles several other *Reuteria,* but may be distinguished by the lack of large green blotches on the dorsum, the pale veins on the membrane, the tergal process, and the bifurcate right genital clasper. This species was taken most often on *Carya* spp.

Reuteria dobsoni n. sp.

Male: Holotype, length 4.64 mm, width 1.56 mm. **Dorsum:** pale to white, marked with green; thinly clothed with simple, silvery-white semierect pubescence. **Head:** width 0.74 mm, vertex 0.36 mm, tylus tinged with green. **Rostrum:** length 1.28 mm, apex fuscous, reaching posterior margin of middle coxae. **Antennae:** I, 0.40 mm, white, outer black line stout, uniformly thick, inner line tapering to a point at base; II, 1.60 mm, yellowish or testaceous with narrow black annulus at base; III, 1.10 mm, yellowish; IV, 0.70 mm, yellowish. **Pronotum:** length 0.60 mm, width at base 1.16 mm; white, lightly tinged with green along margins; area of calli dingy white. **Hemelytra:** translucent white, tinged with green on mesoscutum, apex of scutellum, inner angle of clavus and cuneus; a greenish spot present at apex of embolium and cuneus. **Membrane:** opaque white; veins green, darker posteriorly, a fuscous or brownish spot present at posterior margin of large areole. **Venter:** whitish, propleura and sides of abdomen tinged with green. **Legs:** whitish, very lightly tinged with green; front and middle femora with small, greenish apical markings, hind femora with 3 large green blotches on dorsal aspect, the distal one being larger and more slender; anterior half of knees black; tibiae white to testaceous; tarsi and claws pale. **Genitalia:** fig. 6.

Female: Allotype, length 4.40 mm, width 1.60 mm. **Head:** width 0.70 mm, vertex 0.42 mm. **Rostrum:** length 1.28 mm. **Antennae:** I, 0.46 mm; II, 1.62 mm; III, 1.16 mm; IV, 0.72 mm. **Pronotum:** length 0.80 mm, width 1.18 mm. Similar to male in color, markings and pubescence.

HOLOTYPE: ♂, Pennsylvania, York Co., 2 mi. south of Dillsburg, Aug. 5, 1974, B. Stinner, on *Quercus bicolor* (NMNH TYPE NO. 73661); ALLOTYPE: ♀, same data as holotype (NMNH); PARATYPES: 1♂, Pennsylvania, Dauphin Co., Conewago Twp., Brandt Farm, Aug. 3, 1972, T.J. Henry, at black light trap (TJH); 1♂, Pennsylvania, Butler Co., 7 mi. W. of Butler, Rt. 422, July 24, 1973, A.G. Wheeler, Jr., on *Carya laciniosa* (PDA); 1♂, Pennsylvania, Centre Co., Boalsburg, Twin View Nurs. July 30, 1974, A.G. Wheeler, Jr., on *Quercus palustris* (PDA).

Remarks: *R. dobsoni* closely resembles *bifurcata,* but is easily separated by the larger size, green blotches on the hind femora and distinctive male genitalia which most closely resemble those of *platani.*

This species is named after Professor R.C. Dobson, Department of Entomology, Purdue University, who is an inspiration to all students having the privilege to work with him and who has done much to stimulate my interests in entomology.

Reuteria fuscicornis Knight

Reuteria fuscicornis Knight 1939:129; Hoffmann et al. 1949:19; Carvalho 1958:130; Kelton 1959:28,64; Akingbohungbe et al. 1972:12.

Male: length 4.30 mm, width 1.30 mm. **Dorsum:** pale to white; clothed with recumbent white or silvery pubescence. **Head:** width 0.65 mm, vertex 0.55 mm, buccula, lorum and tylus tinged with green. **Rostrum:** length 1.21 mm, reaching middle of intermediate coxae. **Antennae:** I, 0.43 mm, black lines in some specimens very heavy; II, 1.53 mm, black, apex testaceous (Fig. 1); III, 1.17 mm, testaceous; IV, 0.88 mm, testaceous. **Pronotum:** length 0.52 mm, width at base 1.12 mm. **Hemelytra:** white, apex of clavus, cuneus, embolium and base of cuneus and middle area of corium marked with green. **Membrane:** translucent white; veins greenish, with a fuscous spot on posterior margin of large areole. **Legs:** pale; knees black; hind femora with dark green blotches on dorsal aspect. **Genitalia:** fig. 7.

Female: length 4.28 mm, width 1.56 mm. **Head:** width 0.64 mm, vertex 0.40 mm. **Rostrum:** 1.36 mm. **Antennae:** I, 0.44 mm; II, 1.44 mm; III, 1.08 mm, IV, 0.84 mm. **Pronotum:** length 0.50 mm, width at base 1.02 mm. Similar to male in color, markings and pubescence.

Distribution: Ia., Ill., Minn., N.Y., Ont. (Knight 1941).

Host: hornbeam, *Ostrya virginiana;* American hornbeam, *Carpinus caroliniana* (Knight 1941).

Specimens Examined – DISTRICT OF COLUMBIA: 2♀♀, Washington, July 20, 1907 O. Heidemann (CU). MARYLAND: 2♂♂, Odenton, July 12, 1914, July 21, 1918, W.L. McAtee, on chestnut; 1♀, Great Falls, July 21, 1919, W.L. McAtee; 1♀, Glen Echo, July 1, 1923, J.R. Malloch (NMNH). MASSACHUSETTS: 8♂♂, 10♀♀, Holliston, 5, 7, 29, 30-VII, N. Banks (AMNH). NEW JERSEY: 1♂ Berkley Hgts., VII-7, E.L. Dickerson (AMNH). PENNSYLVANIA: 5♂♂, 2♀♀, Spring Br., DDT Expt., Aug. 25, 1945 (NMNH); 1♀ Butler Co., 7 mi. W. of Butler, Rt. 422, July 24, 1973, A.G. Wheeler, Jr., on *Cornus racemosa* (PDA); 2♀♀, Cambria Co., Johnstown, July 24, 1975, A.G. Wheeler, Jr., reared from *Carpinus caroliniana* (PDA).

Remarks: This species is easily distinguished by the fuscous second antennal segment and by the tergal process. The *Reuteria* n. sp. referred to by Hoffmann et al. (1949) is *fuscicornis.*

Reuteria irrorata (Say)

Capsus irroratus Say 1832:346.

Malacocoris irroratus, Uhler 1878:507; Atkinson 1889:144; Osborn 1892:123; Heidemann 1892:226; Uhler 1894:267; Osborn 1900:201; Crevecoeur 1905:233; Tucker 1907:59.

Reuteria irrorata Horvath 1908:10; Reuter 1909:70 (in part); Hüeber 1908:228; Smith 1910:160; Reuter 1912:59 (in part); Knight 1918:129, 1922:281, 1923:523; Hussey 1922:33; Blatchley 1926:851; Knight and McAtee 1929:12; Knight 1939:129, 1941:93, 94, 95; Froeschner 1949:169; Carvalho 1952:78 (in part), 1958:130 (in part); Akingbohungbe et al. 1972:12; Slater 1974:156, 191, 192 (in part); Wheeler and Henry 1975:366.

Male: length 4.20 mm, width 1.30 mm. **Dorsum:** pale to white; clothed with suberect white or silvery pubescence. **Head:** width 0.69 mm, vertex 0.35 mm, tinged with green on buccula, lorum, tylus and behind eyes. **Rostrum:** length 1.18 mm, reaching middle of intermediate coxae. **Antennae:** I, 0.38 mm; II, 1.41 mm, testaceous, a narrow black annulus at base (Fig. 2); III, 1.41 mm, testaceous; IV, 0.56 mm, testaceous. **Pronotum:** length 0.62 mm, width at base 1.25 mm. **Hemelytra:** translucent white, strongly marked with green blotches on clavus, corium and cuneus; base and apex of cuneus and apex of embolium with dark green spots. **Membrane:** clear or transparent white, with a small fuscous mark near posterior margin of large areole; veins green. **Venter:** conspicuously tinged with green, especially on propleura. **Legs:** pale to testaceous; knees black; hind femora marked with 3 or 4 green blotches on dorsal aspect. **Genitalia:** fig. 8.

Female: length 4.20 mm, width 1.48 mm. **Head:** width 0.68 mm, vertex 0.40 mm. **Rostrum:** 1.18 mm. **Antennae:** I, 0.42 mm; II, 1.44 mm; III, 0.92 mm; IV, 0.56 mm. **Pronotum:** length 0.50 mm, width at base 1.04 mm. Similar to male in color, markings and pubescence.

Distribution: Kans. (Tucker 1907); Ia., Ill., Ind., Minn., N.Y. (Knight 1941); Mo. (Froeschner 1949); Wisc. (Akingbohungbe et al. 1972).

Host: river birch, *Betula nigra* (Heidemann 1892); bur oak, *Quercus macrocarpa* (Crevecoeur 1905); chestnut, *Castanea dentata;* hickory, Carya sp. (Knight and McAtee 1929); American elm, *Ulmus americana;* common baldcypress, *Taxodium distichum* (Knight 1941).

Specimens Examined – INDIANA: 3♂♂, Tippecanoe Co., June 26, 1934, G.E. Gould; 1♂, Fountain Co., July 7, 1935, G.E. Gould; 1♀, Clark Co., State Forest, June 24, 1937, B.E.M.; 1♀, Tippecanoe Co., Aug. 16, '32 (1948) H.O. Deay, on elm (PU). NORTH CAROLINA: 1♂, Mecklenburg Co., Rt. 51, 1 mi. W. of Rt. 16, nr. Matthews, June 16, 1974, A.G. Wheeler, Jr., on *Quercus stellata* (PDA). PENNSYLVANIA: 7♂♂, 2♀♀, State College, July 20, 1949, S.W. Frost (PSU); 1♂, Philadelphia Co., Chestnut Hills, Morris Arboretum, July 11, 1974, A.G. Wheeler, Jr., on *Acer palmatum* (PDA); 1♂, Dauphin Co., Harrisburg, 2301 No. Cameron St., Agri. Building, July 10, 1974, T.J. Henry, on *Ulmus americana* (PDA); 1♀ Montgomery Co., Fort Washington, Aug. 1, 1974, A.G. Wheeler, Jr., on *Ulmus* sp. (PDA). WISCONSIN: 4♂♂, 11♀♀, Dane Co., July 12, 14, 1971, A.E. Akingbohungbe, on elm and bur oak (UW).

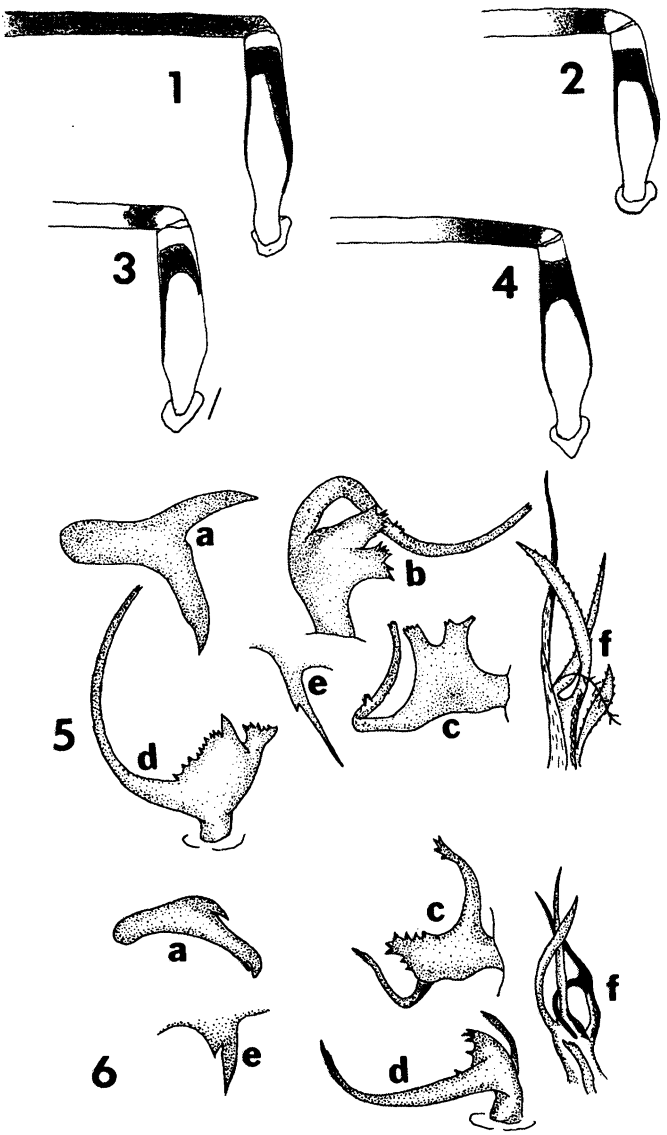

Fig. 1-4, 1st and 2nd antennal segments of *Reuteria* spp, 1, *fuscicornis* Knight. 2, *irrorata* (Say). 3, *platani* Knight, 4, *querci* Knight.

Fig. 5-6, male genitalia of *Reuteria* spp.; a, left clasper; b-d, right clasper (b, anterior view, c, lateral view; d, posterior view); e, tergal process; f, spiculi of aedeagus. 5, *bifurcata* Knight. 6, *dobsoni* n. sp.

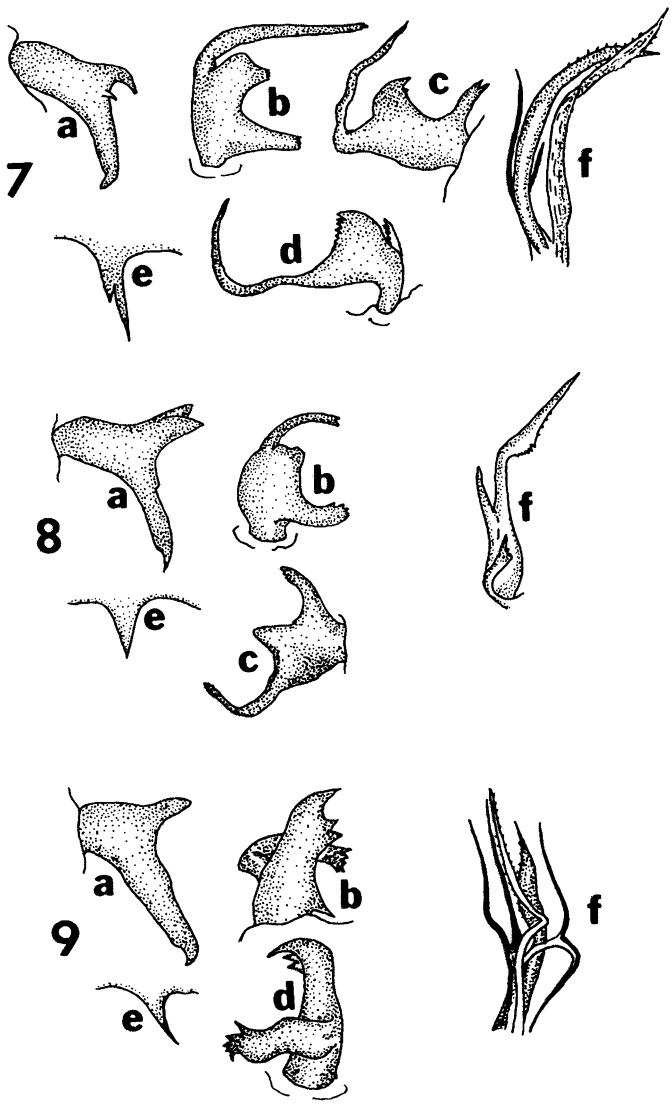

Fig. 7-9, male genitalia of *Reuteria* spp.; a, left clasper; b-d, right clasper (b, anterior view, c, lateral view, d, posterior view); e, tergal process; f, spiculi of aedeagus. 7, *fuscicornis* Knight. 8, *irrorata* (Say). 9, *marqueti* Puton.

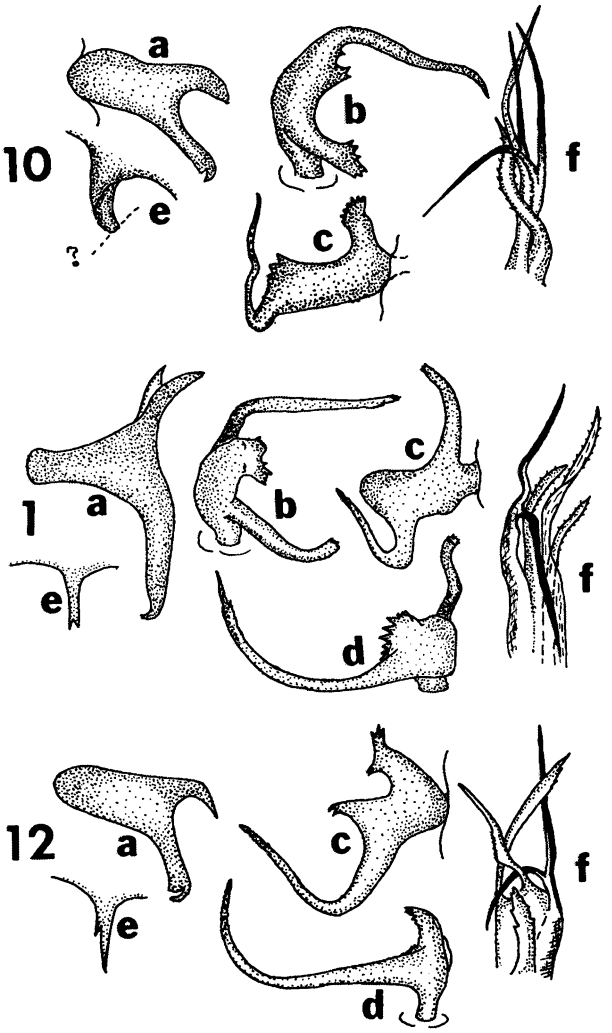

Fig. 10-12, male genitalia of *Reuteria* spp.; a, left clasper; b-d, right clasper (b, anterior view, c, lateral view, d, posterior view); e, tergal process; f, spiculi of aedeagus. 10, *platani* Knight. 11, *querci* Knight, 12, *wheeleri* n. sp.

Remarks: *R. irrorata* may be separated from the other species by the conspicuous green blotches on the clavus, corium and dorsal aspect of the hind femora, the shorter rostrum and by the male genitalia. Superficially, *irrorata* resembles *marqueti.* This fact alone probably led early workers to confuse the two species. All references to *irrorata* (Say) in Europe are erroneous and actually represent *marqueti* Puton. Since these species were considered one for many years, European workers incorrectly cited both North America and Europe in their records. Stichel's (1957) distribution record for Mexico probably refers to the genus *Saileria* Hsiao.

My attempts have failed to locate Say's mirid material. It appears to have been either lost or destroyed. Upon Say's death, his collection was housed at the Academy of Natural Sciences of Philadelphia. Later his collection, already largely "vermin-eaten," was shipped to T.W. Harris at Harvard (Dow 1913). Further destruction occurred during transportation by stagecoach to Massachusetts (Mallis 1971). Uhler (1876) noted that a few of Say's Hemiptera "types" were present in the Harris collection, but badly damaged by dermestids. Harvard's Hemiptera (except the Harris collection) were traded to the American Museum of Natural History in N.Y. in 1970. Through the kind efforts of Dr. R.T. Schuh (AMNH) and Ms. M.K. Thayer (MCZ), these collections were searched without success for any possible Say specimens. Dr. H.H. Knight, Iowa State University, also indicated that Say's mirid material no longer exists (personal communication). Thus, it is concluded that the type of *irrorata* no longer exists.

Say's original description of *Capsus irroratus* clearly places this plant bug in the genus *Reuteria,* but is not sufficient to separate it from all other species. Since Say's specimen(s) cannot be located, I find it necessary to follow Knight's (1939, 1941) interpretation of *irrorata* (Say). To preserve this concept, a neotype is designated for this species.

NEOTYPE: ♂, Indiana, White Co., Monticello, Tall Timbers Marina, Lake Shafer, July 9, 1975, T.J. Henry, on *Ulmus fulva* (NMNH Type No. 73730).

Reuteria marqueti Puton
(Type of genus)

Reuteria marqueti Puton 1875:519; Reuter 1883:325; Löw 1883:60; Hüeber 1909:238; Knight 1922:281, 1939:129; Wagner 1961:52, 1967:157, 1973:162.
Reuteria marquetii, Atkinson 1890:144.
Reuteria irrorata, Horvath 1908:10 (in part); Reuter 1909:70 (in part); Oshanin 1910:854 (in part); Reuter 1912:59 (in part); Hedicke 1935:54 (in part); Cerutti 1937:32; Wagner 1952:111, 1956:419 (in part); Carvalho 1952:78 (in part), 1958:130 (in part); Seidenstücker 1954:82; Stichel 1956:503 (in part).

Male: length 4.68 mm, width 1.54 mm. **Dorsum:** pale to white; clothed with white or silvery pubescence. **Head:** width 0.74 mm, vertex 0.36 mm. **Rostrum:** length 1.20 mm, reaching middle of hind coxae. **Antennae:** I, 0.50 mm; II, 1.64 mm; III, broken; IV, broken. **Pronotum:** length 0.56 mm, width at base 1.10 mm, white, calli somewhat yellowish. **Hemelytra:** white with large green blotches on corium and clavus, green

marking along inner and outer margin of clavus and apex of embolium. **Membrane:** transparent with two vague brownish patches on apical half; veins green; large areole bordered by fuscous mark on posterior margin. **Legs:** pale; knees black; middle femora sometimes with green blotch near apex, hind femora with a short brown line at apex of dorsal aspect, and often mixed with green blotches. **Genitalia:** fig. 9.

Female: length 4.49 mm, width 1.52 mm. **Head:** width 0.72 mm, vertex 0.40 mm. **Rostrum:** length 1.37 mm. **Antennae:** I, 0.45 mm; II, 1.54 mm; III, 0.92 mm; IV, 0.63 mm. **Pronotum:** length 0.53 mm, width at base 1.11 mm. Similar to male in color, markings and pubescence.

Distribution: Czechoslovakia (Stichel 1957); Austria, France, Germany, Greece, Hungary, Italy, Switzerland (Carvalho 1958).

Host: *Carpinus* (Löw 1883); *Alnus, Quercus, Rubus, Tilia,* and *Ulmus* (Göllner-Scheiding 1973).

Specimens Examined – FRANCE: 2♂♂, Toulouse, Marquet (BM). GERMANY: 7♀♀, Saxonia sept. Leipzig, Albert-Park, 1-9-1951, Dorn.; 1♀, 28-7-38, Mainz Stadpark, E. Wagner; 1♂, Naumburg, Burgergarten, 21-8-27, coll. K. Dorn (ZMHU). HUNGARY: 1♀, Simontornya, Leg. 1929, 24-VIII, F. Pillich (ZMHU).

Remarks: This species superficially resembles *irrorata* with the presence of large green blotches on the dorsum, but may easily be distinguished by the male genitalia. All specimens examined from Europe are distinct from the Nearctic species. The specimens from "Toulouse" are smaller (3.90-4.00mm). All other structures appear identical except for slight normal variation noted in the left genital clasper of the "Toulouse" specimens, those from Germany, and those figured by Seidenstücker (1954). Wagner's (1973) drawing of the vesica is incomplete. *R. marqueti* is undoubtedly a good species and so far is restricted to the Palearctic region.

Reuteria platani Knight

Reuteria platani Knight 1941:95; Carvalho 1958:130.

Male: length 4.20 mm, width 1.60 mm. **Dorsum:** pale to white; clothed with white or silvery pubescence. **Head:** width 0.72 mm, vertex 0.34 mm. **Rostrum:** length 1.32 mm, reaching hind margin of middle coxae. **Antennae:** I, 0.40 mm, inner black line abbreviated, forming a J-shaped mark (Fig. 3); II, 1.50 mm, a narrow black annulus at base; III, 1.02 mm; IV, broken. **Pronotum:** length 0.54 mm, width at base 1.16 mm. **Hemelytra:** white, apex of embolium and cuneus with a green spot, cuneus tinged with green, a few dark setae present. **Membrane:** clear translucent, veins pale. **Legs:** pale; knees black; hind femora with or without light green blotches on dorsal aspect. **Genitalia:** fig. 10.

Female: length 4.90 mm, width 1.64 mm. **Head:** width 0.73 mm; vertex 0.41 mm. **Rostrum:** 1.42 mm. **Antennae:** I, 0.43 mm; II, 1.77 mm; III, 1.12 mm; IV, 0.65 mm. **Pronotum:** length 0.60 mm, width at base 1.16 mm. Similar to male in color, markings and pubescence.

Distribution: Ill. (Knight 1941).

Host: sycamore, *Platanus occidentalis* (Knight 1941).

Specimens Examined – DISTRICT OF COLUMBIA: 2♀♀, Washington, July 25, 1908, O. Heidemann (CU). PENNSYLVANIA: 1♂, Northampton Co., Rt. 191, Hecktown, July 26, 1973, K.R. Valley, on *Platanus occidentalis;* 1♀, Northampton Co., Bethlehem, Holy Cross Cem., July 31, 1973, J. Spirk, on *Platanus* sp.; 1♀, Chester Co., Turnpike, E. of Exit 23, Aug. 6, 1973, J.F. Stimmel and A. G. Wheeler, Jr., on *P. occidentalis;* 4♀♀, Northampton Co., Farmerville, St. Johns Cem., Aug. 9, 1973, J. Spirk, on *P. occidentalis;* 2♀♀, Northampton Co., Easton, Hay's Cem., Aug. 14, 1973, J. Spirk, on *P. occidentalis;* 1♀, Dauphin Co., Harrisburg, Wm. Penn H.S., Aug. 9, 1974, T.J. Henry and J.F. Stimmel, on London plane, *P. acerifolia* (PDA).

Remarks: Previously known only from the original description, *platani* was described from 2♀♀ collected in Ill. I now have examined a single ♂ and 9♀♀ from Pennsylvania collected on two species of *Platanus.* The J-shaped marking on the first antennal segment is quite distinct and may be used to separate *platani* from other species.

Reuteria pollicaris Knight

Reuteria pollicaris Knight 1939:131; Carvalho 1958:130.

Remarks: This species is known only from the type-locality, Aberdeen, Mississippi. Knight (1939, 1941) illustrated the male claspers which show a close relationship to *irrorata* and *querci.* The tergal process is quite similar to that of *querci* but has the apex truncate. It also possesses a lateral branch which is not spine-like but more or less bifid and rounded apically.

Reuteria querci Knight

Reuteria querci Knight 1939:131; Carvalho 1958:130; Akingbohungbe et al. 1972:12.

Male: length 4.30 mm, width 1.40 mm. **Dorsum:** pale to white, tinged with green; densely clothed with white or silvery pubescence. **Head:** width 0.71 mm, vertex 0.35 mm. **Rostrum:** 1.17 mm, reaching anterior margin of hind coxae. **Antennae:** I, 0.43 mm; II, 1.51 mm, testaceous, black on basal third (Fig. 4); III, 0.95 mm; IV, 0.56 mm. **Pronotum:** length 0.56 mm, width at base 1.14 mm. **Hemelytra:** white, tinged with green, clavus and corium with scattered light green blotches, cuneus marked with green, especially at base and apex. **Membrane:** translucent; veins green, a fuscous mark at posterior angle of large areole. **Legs:** pale, tinged with green; knees black; front and middle femora occasionally with green blotches, hind femora with green blotches on dorsal aspect. **Genitalia:** fig. 11.

Female: length 4.40 mm, width 1.50 mm. **Head:** width 0.70 mm, vertex 0.35 mm. **Rostrum:** 1.24 mm. **Antennae:** I, 0.44 mm; II, 1.50 mm; III, 1.02 mm; IV, 0.62 mm. **Pronotum:** length 0.52 mm, width 1.12 mm. Similar to male in color, markings and pubescence.

Distribution: Ia., Ill., Md., Minn., N.Y., Va. (Knight 1941); Mo. (Froeschner 1949).

Specimens Examined – DISTRICT OF COLUMBIA: 4♂♂, 1♀, Washington, July 14, 16, 1897, O. Heidemann (CU, AMNH). IOWA: 1♂, 1♀, Ames, July 12, 1929, H.M. Harris (LSU). NEW YORK: 1♂, New Rochelle, VII-21-1949, L. Lacey, at light (AMNH).

NORTH CAROLINA: 5♂♂, 13♀♀ and nymphs, Mecklenburg Co., Rt. 51, 1 mi. W. of Rt. 16, nr. Matthews, July 6, 7, 1974, A.G. Wheeler, Jr., on *Quercus stellata* (PDA); 7♂♂, 12♀♀ and nymphs, July 4, 5, 1975, same locality as 1974 (PDA). VIRGINIA: 1♂, 7♀♀, Falls Church, 16 July, N. Banks (AMNH).

Remarks: This species may be separated by the broad fuscous area at the base of the second antennal segment and by the male genitalia.

Reuteria wheeleri n. sp.

Male: Holotype, length 4.40 mm, width 1.60 mm. **Dorsum:** whitish with greenish tinge; clothed with simple white or silvery pubescence. **Head:** width 0.74 mm, vertex 0.34 mm; lightly marked with green behind eyes and on buccula and tip of tylus. **Rostrum:** length 1.20 mm, reaching middle of mesocoxae. **Antennae:** I, 0.42 mm, whitish with inner black line tapering to a fine point; II, 1.36 mm, testaceous, black at base; III, 0.94 mm; IV, 0.52 mm. **Pronotum:** length 0.56 mm, width at base 1.10 mm, calli lightly tinged with green. **Hemelytra:** marked with many large greenish blotches, similar to the typical *irrorata;* scutellum green at middle of base; mesoscutum lightly marked with greenish; apex of cuneus and embolium with strong greenish-blue point. **Membrane:** transparent; veins green; a fuscous spot at posterior angle of large areole. **Venter:** whitish, area across coxal cleft greenish, sides of abdomen tinged with green. **Legs:** testaceous; front femora greenish below, middle femora with greenish spot at dorsal apex, hind femora with two blue-green spots at middle and a green line at apex of dorsal aspect; tibiae testaceous, knees black on outer half; last tarsal segment and claws brownish. **Genitalia:** fig. 12.

Female: Allotype, length 4.36 mm, width 1.64 mm. **Head:** width 0.70 mm, vertex 0.40 mm. **Rostrum:** length 1.22 mm, reaching anterior margin of middle coxae. **Antennae:** I, 0.42 mm; II, 1.24 mm; III, 0.94 mm; IV, 0.62 mm. **Pronotum:** length 0.54 mm, width 1.16 mm. Similar to male in color, markings and pubescence.

HOLOTYPE: ♂, North Carolina, Mecklenburg Co., Rt. 51, 1 mi. W. of Rt. 16, nr. Matthews, June 13, 1975, A.G. Wheeler, Jr., on *Quercus stellata* (NMNH Type No. 73662). ALLOTYPE: ♀, same data as for holotype (NMNH). PARATYPES: 4♂♂, 4♀♀, same data as for holotype (NMNH, PDA). 1♂, Georgia, Atlanta, June 11, 1943, P.W. Fattig, det. R.I. Sailer, *Reuteria* n. sp. (NMNH).

Remarks: This species closely resembles *irrorata* in general aspects but may be separated by the larger size, longer rostrum, tergal process, and male genitalia. The male genital claspers most closely resemble those of *dobsoni* and *platani*. This species appeared about one month earlier than *querci* which was collected in abundance on the same host at the same locality in 1974 and 1975.

This species is named after my good friend, Dr. A.G. Wheeler, Jr., who has done much to increase our knowledge of insect biology and who also collected many of the specimens used in this study.

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