

NEW RECORDS AND SPECIES OF ARIZONA  
BARK BEETLES (COLEOPTERA: SCOLYTIDAE)

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Described below are four species of Scolytidae new to science. All were collected in Arizona by the writer during August, 1958. Of special interest is the record of the second Nearctic species of the Palearctic genus *Liparthrum*; other new species belong to the genera *Pseudothysanoes*, *Hylocurus*, and *Morarthurum*.

*Liparthrum arizonicum*, n. sp.

This is the second Nearctic species in this Palearctic genus. It is more closely allied to *squamosus* (Blackman) than to other known species, but may be distinguished by the larger size, by the more shallow, less distinctly impressed stria punctures, by the larger stria hairs, by the longer, broader, interstria scales, and by the distinctly impressed, wider declivital striae and stria punctures.

*Male*.—Length 1.1 mm.; 2.1 times as long as wide; body color brown, the vestiture and antennae much lighter.

Frons feebly convex, slightly impressed above epistoma; surface minutely rugulose, without definite punctures; vestiture rather short and sparse, somewhat more conspicuous along epistoma. Eye oval, entire; finely granulate. Antennal scape longer than funicle; funicle four-segmented; club elongate-oval, devoid of indications of sutures except for a few setae at side margins.

Pronotum 0.7 times as long as wide; widest at base, sides arcuately converging toward the rather broadly rounded anterior margin; surface minutely rugulose, without definite punctures; anterior margin armed by two submarginal, very narrowly separated, slender teeth and behind these three successive submedian pairs of teeth. Vestiture consisting of almost equal numbers of rather short recumbent hairs and somewhat shorter semi-erect, broad scales.

Elytra 1.4 times as long as wide, 1.9 times as long as pronotum; basal margins each armed by a row of five subcontiguous rather large crenulations near scutellum, the most lateral crenulation at base of interspace four; sides straight and subparallel on basal three-fourths, broadly rounded behind; striae not impressed, the punctures rather large and close, but not sharply defined; interstriae narrower than striae, the punctures apparently rather large, but poorly defined; the general surface appearing obscured by an incrustation. Declivity convex, steep; striae somewhat narrower than on disc. Vestiture consisting of rows of rather short recumbent stria hair and rows of somewhat shorter, very broad interstria

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scales, each scale wider than long and separated from other scales in the same row by a space greater than the length of a scale.

*Female*.—Apparently identical with the male except: marginal teeth on pronotum absent and with the other pronotal asperities reduced in size and number. This character may be variable and possibly does not have secondary sexual significance; the sex could definitely be determined by segmentation of the abdomen in only a few of the specimens.

*Type Locality*.—Miller Canyon, Huachuca Mountains, Arizona.

*Host*.—*Arbutus arizonicus*.

*Type Material*.—The male holotype, female allotype and 42 paratypes were collected at the type locality on August 22, 1958, from small branches and twigs of the Arizona Madrone, by S. L. Wood. The galleries were of the simple cave type and, because of the extremely thin bark of the host tree, were engraved mostly below the cambium region. Eggs were deposited around the margins of the irregular cave without being placed in special egg niches. Larval galleries were short and irregular, not oriented in any way to the grain of the wood.

The holotype, allotype and some paratypes are in the collection of the writer, other paratypes are in the U. S. National Museum.

*Pseudothysanoes spinura*, n. sp.

This species is closely allied to *heliura* Wood, but may be distinguished, in the male, by the smaller size, by the slightly produced anteromedian margin of the pronotum which is armed by a pair of subcontiguous, larger marginal and a second pair of smaller submarginal teeth, by the shorter, more numerous scales on the circumdeclivital ridge, and by the presence of about six pair of rather long, coarse, pointed, spinose setae on the first declivital interstriae; and in the female by the smaller size, by the more narrowly impressed frons, by the more pubescent antennal scape, by the more slender pronotum, by the much smaller, less strongly impressed stria punctures, and by the less abundant, shorter elytral pubescence. This species is a bark borer; *heliura* is a wood borer.

*Male*.—Length 1.2 mm., 2.3 times as long as wide, appearing obliquely truncate behind; body color dark brown, lighter in the summit area of pronotum.

Frons very shallowly concave almost from eye to eye, largely concealed in all males at hand but surface evidently minutely rugulose as in the female; pubescence sparse, inconspicuous. Eye oval, entire; finely granulate. Antennal scape long, slender; club ovate, with two straight sutures.

Pronotum about as long as wide, widest one-third length from base; sides arcuate on basal half, subconstricted one-third of length from anterior margin; anterior margin moderately produced medially and armed by a pair of rather large subcontiguous teeth and by a second pair of smaller submarginal ones; summit area elevated, located at center of pronotum; vesiture largely abraded, consisting

of short scales in the posterior area, and longer stout setae in asperate area.

Elytra 1.5 times as long as wide; sides straight and apparently diverging slightly on basal three-fourths, broadly rounded behind; striae not impressed, the punctures small, distinct, not deep; interstriae wider than striae, the punctures finer than, but as numerous as those of striae, obscure. Declivity moderately steep, weakly convex, delimited by a circumdeclivital ridge as in *heliura*, the ridge acute on lower two-thirds of circle, rounded on upper third; stria punctures evident only above; interstriae one rather broad and armed on the lateral side by a row of about six long, coarse, pointed, spinelike setae, the shortest near the upper margin, the longest and lowest about two-thirds of the distance from upper margin, the longest and lowest about two-thirds of the distance from upper margin. Vestiture on disc consisting of rows of short, erect interstitial scales, and minute recumbent stria hairs; on declivity only the pairs of spines and minute stria hairs evident.

*Female*.—Length 1.35 mm., 3.0 times as long as wide; frons more narrowly and deeply impressed at center; scape ornamented by about 15 plumose hairs; antennal club more elongate; anterior margin of pronotum neither armed nor produced; pronotum 1.04 times as long as wide; stria and interstitial punctures somewhat smaller than in male; declivity evenly convex, with no trace of a circumdeclivital ridge; vestiture on disc and declivity as on disc of male.

*Type Locality*.—Oak Creek Canyon, Arizona.

*Host*.—An unknown shrub.

*Type Material*.—The male holotype, female allotype and 22 paratypes were collected at the type locality on August 20, 1958, by S. L. Wood, from an unknown shrub about 6 to 8 feet tall. The shrub was common on the east-facing slope about 50 feet above (west) the highway and immediately south of the Wagon Wheel Motel. It grew in association with small oak trees. The galleries, both adult and larval, were constructed entirely in the cambium region.

The holotype, allotype and some paratypes are in the collection of the writer, other paratypes are in the U. S. National Museum.

*Hylocurus femineus*, n. sp.

A species near *effeminatus* Wood, but larger and, in the male, the transverse frontal elevation much larger, the tubercles at base of declivity smaller, the declivity shining, the ninth interstriae only feebly elevated and bearing granules to posterior extremity of elevated portion, and the vestiture at base of declivity slender, hair-like; and in the female, the frons flattened with the frontal pubescence more abundant, and the ninth declivital interstriae even more feebly elevated.

*Male*.—Length 2.5 mm., 2.6 times as long as wide; body color very dark brown, almost black.

Frons convex, moderately impressed below a coarse transverse elevation at upper level of eyes, the elevation bearing four or five indefinite coarse granules at summit; surface granulose; vestiture consisting of sparse inconspicuous, moderately long setae, more abundant along epistomal margin. Eye and antenna as in other representatives of the genus.

Pronotum 1.1 times as long as wide; widest posteriorly, the sides almost straight and subparallel on basal half. the anterior margin rather broadly rounded; summit indefinite, at center; asperate before summit, granulate behind without evident punctures; vestiture inconspicuous, consisting of sparse, short, hairlike setae, longer and more conspicuous at extreme basal margin.

Elytra 1.5 times as long as wide; sides straight and subparallel on basal three-fourths, abruptly narrowed at declivital margin and terminating behind in a mucro that forms about a 90 degree angle; striae not impressed, the punctures rather coarse and deep; interstriae about as wide as striae, weakly convex, smooth and shining and bearing a row of rather fine shallow punctures, the punctures tuberculate near declivital margin. Declivity steep, similar to that of females of other *Hylocurus* of the *parkinsoniae* group; basal margin rounded; striae continuing to base of mucro, the punctures smaller than on disc; interstriae one and three moderately elevated, one bearing a series of about seven small pointed tubercles of equal size, three bearing about five tubercles the last two much larger, two impressed and smooth except for about two small tubercles at upper margin, the lateral interspaces each bearing three or four small pointed tubercles, the ninth interspace rather weakly elevated and bearing four or five tubercles, not narrowly carinate or projecting posteriorly as in most other *Hylocurus*. Vestiture hairlike. short on disc, longer toward declivity, and short on declivital face; all setae slender, no suggestion of being scalelike.

*Female*.—Similar to male except: frons flattened, the transverse elevation absent, frontal pubescence more abundant, longer, yellow; declivital tubercles slightly reduced. the ninth only feebly elevated; sexual differences in elytral vestiture not readily apparent.

*Type Locality*.—Miller Canyon, Huachuca Mountains, Arizona.

*Host*.—*Juglans major*.

*Type Material*.—The male holotype, female allotype and four paratypes were cut from the wood of a small Arizona walnut sapling about two inches in diameter, at the type locality on August 22, 1958, by S. L. Wood.

The holotype, allotype and two paratypes are in the collection of the writer, other paratypes are in the U. S. National Museum.

#### *Micracis lignator* Blackman

This species was known to the writer only from the original description at the time he described *truncatus* from Mexico. The description and the types of both species suggest that they are quite distinct from one another. However, a series taken by the

writer at Miller Canyon, Huachuca Mountains, on August 22, 1958, and compared to the allotype, demonstrates that Blackman's species is somewhat variable in the development of the interstitial tubercles at the declivital base. The maximum development of these Arizona specimens was about the same as the minimum development of the same tubercles in *truncatus*. The only apparent real difference between these forms appears to be in the smaller, more slender scales on the margin of the declivity in *lignator*. Perhaps when sufficient material in this group is available from northern Mexico it will be possible to determine whether one or two species should be recognized.

As was the case with the type series of *truncatus*, the Miller Canyon specimens were taken from small oak branches about one and one half inches in diameter, in association with *Micracisella knulli* (Blackman).

*Monarthrum huachucae*, n. sp.

This species is very closely allied to *scutellare* Leconte, but differs, in the male, in having the acutely elevated lateral declivital margins extending much higher on the declivity and in having the two pair of teeth at the top of the declivity closer together and closer to the suture; in the female, the frons more narrowly carinate on lower half and bearing a pair of rather large subcircular pubescent areas on each side of the carina, the upper portion of the frontal area more finely, deeply punctured, the posterior face of the antennal club bearing a tuft of long hair, and the sutural striae on declivity more narrowly and deeply impressed.

*Male*.—Length 3.5 mm., 3.1 times as long as wide; body color brown, the elytra somewhat lighter on basal half.

Frons convex, transverse epistomal elevation as in *scutellare*; surface minutely rugulose and dull below, becoming almost smooth and shining above eyes, the punctures small, deep above and shallow to obscured below. Eye as in *scutellare*. Antennal club similar to that of *scutellare* except the sutures more strongly arcuate.

Pronotum 1.6 times as long as wide; sides straight and subparallel on basal two-thirds, rather broadly rounded in front; finely asperate on less than the anterior half, surface minutely reticulate and dull on more than posterior half and very finely shallowly, sparsely punctured.

Elytra 1.8 times as long as wide, 1.4 times as long as pronotum; sides straight and subparallel on basal three-fourths, the posterolateral declivital margin forming the abrupt, broadly rounded posterior outline, the sutural notch acute; striae not impressed, scarcely visible, the punctures minute, shallow; interstriae flat, minutely and irregularly punctured, dull. Declivity oblique, excavate, beginning two-thirds of distance from base, the lateral margins acutely elevated as in *scutellare* and inscribing at least two-thirds of complete circle, the costae ending abruptly above in an

obtuse angle that may be tuberculate medially; upper margin between costae rounded and armed by two pair of teeth, the median pair smaller, the distances from suture to first tooth, first to second tooth, and second tooth to base of costa all about equal; declivital face as in *scutellare*, with numerous very minute, shallow punctures. Vistiture sparse and short on sides, near declivity, and on declivital face; longer and much more abundant along inner face of declivital costae; disc glabrous.

*Female*.—Similar to male except: lower half of frons bearing a patch of long, slender, yellow pubescence partly divided by an obtuse low carina, each pubescent area roughly circular in outline; posterior face of antennal club bearing a tuft of long hair (mostly on posterior portion), some hairs extending a distance equivalent to more than half the length of the club from the tip; declivity steeper, without lateral costae, acutely margined only on lower margin, face more strongly convex than *scutellare* with a narrow median sulcus and the suture narrowly, weakly elevated, armed by three pair of minute, pointed tubercles on upper half at margins of sulcus as in *scutellare*.

*Type Locality*.—Miller Canyon, Huachuca Mountains, Arizona.

*Host*.—*Quercus* sp.

*Type Material*.—The male holotype and female allotype were collected at the type locality on June 29, 1907, by H. A. Kaeber. One male paratype was taken at the same locality on August 22, 1958, by S. L. Wood, from the base of an oak tree about six inches in diameter. One female paratype was taken four miles southwest of Forestdale, Navajo Co., Arizona, August 23, 1952, by H. B. Leech and J. W. Green.

The holotype and allotype are in the U. S. National Museum, the paratypes are in the collections of the California Academy of Sciences and of the writer.

*Monarthrum dentiger* (Leconte)

Specimens of this California species have been collected in Arizona, but have not been reported from that state. This writer has examined three specimens taken two and a half miles west of Harshaw in the Patagonia Mountains, Santa Cruz Co., Arizona, August 2, 1952, by H. B. Leech and J. W. Green.