

THE LONGICORN TRIBE ATIMIINI
(COLEOPTERA, CERAMBYCIDAE)

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The systematic position of the Atimiini has long puzzled the Coleopterist. *Atimia* presents such a strong Lamiine facies that Haldeman, who erected the genus, associated it with *Saperda*. Lacordaire (1869), observing the absence of the essential Lamiine groove on the anterior tibiae, placed *Atimia* in the Cerambycine series near *Smodicum*. This arrangement appeared unsatisfactory to LeConte (1873) who shifted the genus to a position roughly between the Clytine and Lepturine series. Gahan (1908), when searching for a connection between the Lepturine and Lamiine groups of longicorns, selected *Atimia* as a possible link. A few years later Webb (1912), solely on the basis of larval characters, associated the genus with *Asemum*. Leng (1920), apparently following Aurivillius (1912), placed the Atimiini toward the end of the Cerambycine series near the Clytini, separating it rather widely from both the Asemini and Lepturini. A careful examination of the external characters of the adults (including wing venation) and the larvae has convinced the writer that Webb's treatment of the group was by far the most satisfactory and that the Atimiini should be regarded as a tribe of the subfamily Aseminae.

Subfamily ASEMINAE Thomson

Thomson, 1864, System. Ceramb., p. 266, *Asemitae*

LeConte, 1873, Smithson. Misc. Coll., XI, 265: 292, *Asemini*

Schiödte, 1875, Naturh. Tidskr., (3) 10: 398, *Asemini*

Webb, 1912, U. S. Dept. Agr., Tech. Ser., Bull. 20: 151, Aseminidae

Craighead, 1915, U. S. Dept. Agr., Rep. Ser., 107: 8.

Craighead, 1923, Can. Dept. Agr., Bull. 27: 30.

Head subvertical; antennae inserted near, but usually not embraced by, the eyes, usually shorter than the body in both sexes, segments pubescent, second segment longer than broad, one-half or nearly one-half as long as third segment; eyes emarginate, rarely divided, usually coarsely granulated; labrum free; mandibles acute, molar tooth and pubescent fringe lacking; lobes of maxillae usually feebly developed; palpi with last segment

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truncate at apex; base of labial palpi connate, not retractile; ligula corneous; mentum trapezoidal; gula without an intermaxillary mentigerous process; pronotum without a lateral margin, sides entire; anterior coxae transverse or subglobose, cavities open or closed behind; mesonotum with a stridulating plate divided by a median vitta; intermediate coxal cavities variable; metepisterna moderate, usually narrowed posteriorly. Legs moderately short; anterior tibiae without a mesial sinus; tarsi pseudo-tetramerous, padded beneath, third segment dilated, bilobed, concealing the minute fourth segment, paronychium absent. Elytra parallel-sided or narrowed posteriorly, apices variable; posterior wings occasionally with a closed cell in the anal sector, radial cell closed, veins $2A_1$ and $2A_2$ present, $1A$ connected with $2A_{1+2}$.

The Asemine longicorns were first given primary rank by Schiödte (1875) on the basis of larval characters. A restudy of the structure of the adult beetles would seem to confirm Schiödte's views and to warrant recognition of the group as a subfamily. The closest relationships of the Aseminae appear to be with the Lepturinae, a group from which most systematists have separated them rather widely. The outstanding characters shared by the two subfamilies, and which are at variance with those of the groups with which they have been previously associated, are the primitive type of wing venation (with the maximum number of veins for the family and often a closed cell in the anal sector) and a divided mesonotal stridulatory plate. Striking similarities are also apparent in the larvae which in both groups have the tentatorial cross-arm internal and in some cases show intergradation in epicranial and mouth part characters. In general, however, larval Aseminae may be distinguished from larval Lepturinae by the absence of protuberant epipleura from the basal abdominal segments and the partial fusing of the halves of the epicranium. Adult Aseminae differ from Lepturinae by the absence of a mentigerous gular process, in the short, broad head which is not narrowed between the eyes, the elongate second segment of the antennae, and the simple mandibles, without a molar tooth or pubescent fringe.

The Asemini of LeConte and Horn (roughly Aseminae) included three groups, the Asemi, Opsimi, and Smodicini (Asemini, Opsimini, and Smodicini of later workers). Craighead (1923), on the basis of larval characters, has transferred the Smodicini to the Cerambycinae but has retained *Opsimus* in the Aseminae. However, the larva of *Opsimus* exhibits the essential character of the Cerambycinae, a rounded, gouge-like cutting edge on the mandibles, and the adult a large, undivided, mesonotal stridulatory plate and typically cerambycine wing venation. It would therefore seem preferable to regard *Opsimus* (and the related *Dicentrus*) as cerambycine, restricting the Aseminae to two tribes as follows:

Base of antennae embraced by eyes; anterior coxal cavities closed behind, intercoxal process dilated at apex; intermediate coxal cavities closed; wings with an anal cell *Atimiini*

Base of antennae not embraced by eyes; anterior coxal cavities open behind, intercoxal process not dilated at apex; intermediate coxal cavities open to epimeron; wings without an anal cell *Asemini*

Tribe ATIMIINI LeConte

- LeConte, 1873, *Smithson. Misc. Coll.*, 265: 322.
- LeConte and Horn, 1883, *Smithson. Misc. Coll.*, 507: 307.
- Leng, 1885, *Brooklyn Ent. Soc.*, 7: 61.
- Bradley, 1930, *Man. Genera Beetles*, 228.

Head transverse, front short, vertical, mouth parts nearly horizontal; antennae eleven-segmented, shorter than the body in both sexes, eyes large, moderately granulated, deeply emarginate, embracing antennal insertion; labrum transverse, ciliated; palpi unequal in length, the maxillary longer. Pronotum quadrate, transverse; anterior coxae rounded, cavities usually not angulated, completely closed behind; mesonotum with a large, divided, stridulatory area; scutellum subquadrate; intermediate coxal cavities closed; metasternum deeply emarginate posteriorly, metepisterna narrow, attenuated behind. Legs short; femora feebly clavate; tibiae armed with short spurs. Wings with a closed cell in the anal sector.

In food habits, this tribe is very specialized. The species of *Atimia* are all restricted to cupressaceous trees (including the closely related *Taxodium* and *Sequoia*) and the single species of *Paratimia* is unique among the American Cerambycidae in that its life history is completed within the cones of the genus *Pinus*.

KEY TO THE GENERA OF ATIMIINI

- Elytra, and usually the pronotum and abdomen, with denuded areas; last segment of maxillary palpi cylindrical; anterior coxae widely separated by prosternum *Atimia*
- Elytra, pronotum, and abdomen without denuded areas; last segment of maxillary palpi triangular; anterior coxae narrowly separated by the prosternum *Paratimia*

Genus ATIMIA Haldeman

- Atimia* Haldeman, 1847, *Trans. Am. Philos. Soc.*, (2) 10: 56.
- Haldeman, 1847, *Proc. Am. Philos. Soc.*, 4: 373.
- LeConte, 1850, *Jour. Acad. Nat. Sci., Phila.*, (2) 2: 25.
- Thomson, 1864, *Systema Ceramb.*, p. 441.
- Lecordaire, 1869, *Genera Coleopt.*, 9: 144.
- Gahan, 1908, *Ann. Mag. Nat. Hist.*, (8) 1: 144.
- Linsley, 1934, *Pan-Pac. Ent.*, 10: 23-26.

Form elongate oval, moderately convex; vestiture coarse, appressed, with an intermixture of long, erect, setae on dorsal surface, elytra and usually the pronotum and abdominal sternites, with a pattern of denuded areas. Head short, broad; eyes very deeply emarginate, nearly divided, dorsal and ventral lobes connected by a double row of facets; antennal scape subconical, rarely subcylindrical. Pronotum distinctly wider than long, sides obtuse or nearly straight, usually with a distinct subapical angle, never evenly rounded from base to apex; anterior coxae widely separated by prosternum, intercoxal process at least one-half as broad as coxae, cavities rounded or feebly angulate externally. Elytra about twice as long as basal width, broad at base, tapering apically; disk with a feeble costa one-third of the distance between suture and lateral margin, the costa most evident at apical one-third; apices emarginate or truncate, rarely separately rounded. Abdomen of female with fifth tergite wider than long, gradually narrowed from base, apex not more than half as wide as base, emarginate or truncate, fifth sternite barely longer than fourth, rounded or subtruncate at apex.

Genotype: *Atimia tristis* Haldeman (by single reference).

KEY TO THE SPECIES OF *ATIMIA*

1. Antennae with third segment distinctly more than twice as long as second segment; elytral apices distinctly emarginate or very obliquely truncate 2
 Antennae with third segment at most only twice as long as second segment; elytral apices rounded or transversely truncate . 4
2. Scutellum longer than broad, narrowly rounded behind; denuded areas of elytra poorly defined, irregular or vittiform, more or less confluent; elytral apices distinctly emarginate, the outer angles frequently dentiform; abdominal sternites distinctly punctured 3
 Scutellum wider than long, broadly rounded behind; denuded areas of elytra well defined, regular, oval, separate, with a coarse puncture and erect seta in the center of each; elytral apices obliquely truncate; abdominal sternites very finely, indistinctly punctured; large species, 10-14 mm. Southern Arizona, New Mexico *huachucae*
3. Pronotum with sides more or less straight, widest before apex, disk with a large, post-median, glabrous, polished area, vittae sub-parallel; denuded areas of elytra longitudinal, vittiform, with a broad band of dense pubescence at sides; fifth abdominal tergite of female truncate or very feebly emarginate at apex. 6-12 mm. British Columbia to northern Lower California *dorsalis*
 Pronotum with sides obtuse, widest at middle, disk without a large, post-median, polished area, vittae arcuate; denuded areas of elytra small, mostly suboval or transverse, the vestiture mottled; fifth abdominal tergite of female strongly emarginate at apex. 7-12 mm. Atlantic Coast and California *confusa*

4. Pronotum irregularly punctured, disk with longitudinal, subglabrous, nearly impunctate, polished vittae 5
- Pronotum more or less evenly, closely punctured, disk without any longitudinal, polished vittae 7
5. Antennae with outer segments cylindrical, not flattened or expanded, scape subconical; depressed pubescence dense, coarse, luteus; elytral apices truncate 6
- Antennae with outer segments flattened, expanded, scape very robust, subcylindrical; depressed pubescence sparse, finer, grayish and brownish; elytral apices separately rounded; color dark brown. 8-12 mm. Central California *helenae*
6. Reddish brown; antennal scape slender, about two and one-fourth times as long as broad, third segment twice as long as second, fifth segment barely longer than fourth; pronotum with sides nearly straight, the vittae subparallel; larger species. 11-12 mm. Southern Mexico *mexicana*
- Dark brown; antennal scape short, robust, only twice as long as broad, third segment only one and one-half times as long as second, fifth segment distinctly longer than fourth; pronotum with sides rounded, the vittae arcuate; smaller species. 6-8.5 mm. New Mexico *vandykei*
7. Black; pubescence ashy gray; third antennal segment distinctly less than twice as long as second segment; denuded areas of elytra small, irregular, or ladder-like, not vittiform. 6-9 mm. Washington and Oregon *hoppingi*
- Dark brown; pubescence luteus; third antennal segment twice as long as second segment; denuded areas of elytra narrow, ladder-like, both longitudinal vittiform and transverse. 6.5 mm. China *chinensis*

ATIMIA HUACHUCAE Champlain and Knull

(Plate 14, fig. 1)

Atimia huachucae Champlain and Knull, 1922, Ent. News, 33: 148
Linsley, 1934, Pan-Pac. Ent., 10: 23.

Female: Form elongate, robust, moderately tapering posteriorly; color brown, antennae, legs, and elytra reddish brown; vestiture coarse, appressed, luteus, with a few scattered, long, erect hairs on head, sides of pronotum and elytra. Head with a well defined, vertical, median, glabrous, impunctate line extending from occiput nearly to clypeus; frons moderately coarsely, closely punctured and very densely clothed with appressed, luteus hairs; neck moderately coarsely, contiguously and subcontiguously punctured on each side of median line; antennae attaining apical one-fourth of elytra, scape subconical, two and one-third times as long as broad, third segment two and one-half times as long as second, fifth segment one and one-third times as long as fourth, outer segments cylindrical, not conspicuously flattened or expanded. Pronotum approximately one and one-fourth times

as broad as long, sides feebly obtuse, widest near middle, sub-apical angles distinct but obtuse; surface dullish, moderately coarsely, closely punctured and pubescent, with four longitudinal, sparsely pubescent, coarsely but less closely, irregularly punctate vittae, the median pair arcuate, the lateral pair nearly straight; disk without a post-median, polished, glabrous area; scutellum wider than long, broadly rounded posteriorly, densely clothed with appressed luteus hairs. Elytra gradually narrowed to apical one-third, thence more strongly converging to apices; surface moderately finely, closely, distinctly punctured and densely clothed with coarse, appressed, luteus hairs except for the polished denuded areas; denuded areas numerous, oval, well defined, separate, with a very coarse puncture and erect seta in the center of each; apices very obliquely truncate, rarely feebly emarginate. Legs reddish, finely punctured and pubescent; posterior tarsi with first segment distinctly longer than the two following together, second segment about one and one-half times as long as apical width. Abdomen with sternites very finely, indistinctly punctured, densely clothed with appressed luteus hairs except for very small, scattered, oval denuded areas and longitudinal, sublateral, polished vittae; fifth tergite emarginate at apex; fifth sternite broadly rounded at apex. Length 12-14 mm.

Type locality: Cooney, New Mexico.

Distribution: Mountains of southern Arizona and New Mexico.

Host: *Cupressus arizonica* Greene.

Flight period: July to September.

This species, of which I have seen only females, has a larger average size than any of the other known species and may be readily recognized by the small, clearly defined, oval denuded areas of the elytra, broad scutellum, finely punctured abdomen, elongate first segment of the posterior tarsi, and the obliquely truncate elytral apices. Twelve specimens have been examined from Carr Canyon, Huachuca Mts. (Linsley) and Mt. Washington, near Nogales, Arizona (Van Dyke). Specimens from the former locality were beaten from branches of the Arizona Cypress.

ATIMIA CONFUSA (Say)

(Plate 14, fig. 7)

Clytus confusus Say, 1826, Jour. Acad. Nat. Sci. Phila., 5: 276.

Atimia confusa, Haldeman, 1847, Proc. Am. Philos. Soc., 4: 373 (syn.).

LeConte, 1850, Jour. Acad. Nat. Sci. Phila., (2) 2: 25.

LeConte, 1859, Compl. Writ., Thom. Say, 2: 333.

Leng, 1890, Entom. Amer., 6: 10.

Wickham, 1897, Can. Ent., 29: 169.

Craighead, 1922, Can. Dept. Agr., Bull. 27: 35 (biol.).

Linsley, 1934, Pan-Pac. Ent., 10: 24.

Atimia tristis Haldeman, 1847, Trans. Am. Philos. Soc., (2) 10: 56.

Male: Form short, robust, gradually tapering posteriorly; color brown, legs, elytra, and often antennae reddish; vestiture coarse, appressed, luteus, with a few long, scattered, erect hairs on head, sides of pronotum, and elytra. Head rather densely clothed with appressed, luteus hairs, except for an irregular, glabrous, impunctate area at middle of frons which is not at all linear; frons moderately coarsely, closely punctured; neck coarsely, contiguously punctured; antennae attaining apical one-third of elytra, scape moderately slender, subconical, about two and one-half times as long as broad, distinctly but not closely punctured; antennae attaining apical one-third of elytra, scape moderately slender, subconical, about two and one-half times as long as broad, distinctly but not closely punctured, second segment one and one-third times as long as broad, third segment two and one-third times as long as second, fifth segment more than one and one-third times as long as fourth, outer segments cylindrical, not strongly flattened or expanded. Pronotum about one and one-fourth times as broad as long, sides obtusely rounded, subapical angle feeble, obtuse; surface shining, moderately coarsely, closely punctured, densely clothed with appressed luteus hairs with four longitudinal, glabrous or sparsely pubescent, irregularly, sparsely, coarsely punctured vittae, the median pair arcuate, the lateral pair nearly straight, poorly defined, disk without a post-median, glabrous, impunctate area; scutellum longer than broad, narrowly rounded behind, densely clothed with appressed, luteus hairs. Elytra gradually narrowed to apex; surface shallowly, irregularly, moderately finely punctured, densely clothed with appressed luteus hairs except for the denuded areas; denuded areas irregular, suboval, not vittiform, often transverse and somewhat confluent, usually with one or more coarse punctures and erect hairs in each; apices emarginate, the outer angles often dentiform. Legs reddish, finely punctured and pubescent; posterior tarsi with first segment about as long as two following together, second segment one and one-third times as long as apical width. Abdomen with sternites shining, moderately finely, closely and distinctly punctured, densely clothed with appressed hairs; fifth sternite broadly, distinctly emarginate at apex.

Female: A little more robust than male; antennae barely surpassing middle of elytra; fifth abdominal tergite distinctly emarginate at apex; fifth sternite broadly rounded at apex.

Type locality: Pennsylvania.

Distribution: Eastern United States and Canada, California.

Host: *Juniperus*, *Cupressus*, *Taxodium*, *Thuja*, *Chamaecyparis*.

Flight period: Two broods, Spring and Fall (Craighead, 1922).

The typical form of this species is smaller than *A. dorsalis* and occurs along the Atlantic coast from Florida to New York and possibly as far west as Texas and Iowa. The forms recorded from the latter states have not, however, been seen by the writer and may belong to some other species. Of this typical form the writer has examined thirty-eight specimens from New York, Pennsylvania, Maryland and Virginia, all reared from *Juniperus virginiana* Linn. Craighead gives as hosts also *Thuja* and *Chamaecyparis*. Mr. Fisher informs me that the collection of the United States National Museum contains specimens from South Carolina, North Carolina, West Virginia, Maryland, District of Columbia, New Jersey, New York, Pennsylvania, Michigan, Iowa, Texas, and New Mexico.

In Coastal Central California, in the native habitat of the Monterey Cypress, *Cupressus macrocarpa* Hartweg, there is a form which I can separate only in color and size from typical *confusa*. This form is larger (male: 8-11 mm. compared to 6-7 mm., female: 9-12 mm. as compared to 7-9 mm.) and the ground color is dark reddish brown. Although this form is separated by about two thousand miles from typical *confusa*, it appears to be only subspecifically distinct and may be designated as *Atimia confusa maritima* Linsley, new subspecies (Holotype male (No. 4851 Calif. Acad. Sci. Ent.) from California, March 27, 1921, and Allotype female (No. 4852 C. A. S., Ent.) from the same locality, May 22, 1922, both collected by Mr. L. S. Slevin on *Cupressus macrocarpa*). Thirty-eight additional specimens have been studied, of which twenty-one examples in the Slevin Collection (deposited in the California Academy of Sciences) are designated as paratypes.

ATIMIA DORSALIS LeConte

(Plate 14, fig. 4)

Atimia dorsalis LeConte, 1869, Ann. Mag. Nat. Hist., (4) 4: 385.

Leng, 1890, Entom. Amer., 6: 10.

Craighead, 1922, Can. Dept. Agr., Bull. 27: 34 (biol.).

Hardy, 1926, Rep. Prov. Mus. B. C., 1925: 32, pl. 4, f. 6.

Linsley, 1934, Pan-Pac. Ent., 10: 24.

Linsley, 1936, Pan-Pac. Ent., 12: 199 (biol.).

Male: Form elongate, moderately slender, tapering posteriorly; color reddish brown; vestiture coarse, appressed, luteus, closely condensed into a pattern at sides of pronotum, elytra, and abdominal sternites, with a few scattered, long, erect hairs on head, sides of pronotum, and elytra. Head densely clothed with appressed, luteus hairs, except for an irregular, glabrous, impunctate area at middle of frons which is not at all linear;

frons moderately coarsely, closely punctured; neck coarsely punctured, the punctures scarcely separated; antennae attaining apical one-third of elytra, scape moderately slender, subconical, a little more than twice as long as broad, second segment one and one-half times as long as broad, third segment two and one-half times as long as second, fifth segment one and one-third times as long as fourth, outer segments cylindrical, not flattened or expanded. Pronotum one and one-fourth times as broad as long, sides nearly straight, widest before apex, subapical angles distinct, more or less acute; surface coarsely, closely punctured and pubescent with two longitudinal, glabrous, impunctate vittae and a post-median, polished, impunctate area, lateral vittae not evident, pubescence of area between vittae sparse, each hair arising from a coarse puncture; scutellum longer than broad, narrowly rounded posteriorly, densely clothed with appressed, luteus hairs. Elytra nearly parallel to apical one-third, thence gradually narrowed to apices; surface shallowly but densely punctured and clothed with appressed luteus hairs except for denuded areas; denuded areas usually in the form of a longitudinal discal vitta and a transverse post-median and subapical area, the lateral pubescence very dense; apices emarginate, the outer angles often dentiform. Legs reddish brown, finely punctured and pubescent; posterior tarsi slender, first segment a little shorter than the two following together, second segment twice as long as apical width. Abdomen with sternites moderately finely but distinctly punctured, densely clothed with appressed hairs at sides, subglabrous at middle; fifth sternite emarginate at apex. Length: 6-11 mm.

Female: Larger and more robust than male; antennae barely surpassing middle of elytra; fifth abdominal tergite truncate or rarely very feebly emarginate at apex; fifth sternite truncate at apex. Length: 8-12 mm.

Type locality: "Vancouver's Island."

Distribution: Pacific coast of North America from British Columbia to the San Pedro Martir Mountains of Lower California.

Hosts: *Libocedrus*, *Thuja*, *Sequoia*, *Cupressus*, *Juniperus*.

Flight period: Late Spring and Summer at higher altitudes and northern portion of range, March to May and September to November in southern portion of range.

This species is very closely related to the preceding and may eventually prove to be only subspecifically distinct. In general the two may be distinguished by the characters enumerated in the key, but it is not uncommon to find specimens in which one or more of the differences break down.

As has been pointed out previously (Linsley, 1936), *A. dorsalis* is double-brooded in the southern portion of its range, the largest brood being active in October and November. The species frequently attacks living cupressaceous trees, but usually only after they have first been weakened by the attack of bark beetles (*Phloeosinus* spp.). In areas where the Monterey Cypress (*Cupressus macrocarpa* Hartweg) has been planted as a windbreak or for ornamental purposes and the trees receive inadequate water, *Atimia* damage may be very severe.

ATIMIA HELENÆ Linsley

(Plate 14, fig. 5)

Atimia helenae Linsley, 1934, Pan-Pac. Ent., 10: 25.

Male: Form elongate, moderately robust, scarcely tapering posteriorly; color dark brown or piceous; vestiture sparse, only moderately coarse, appressed, grayish and brownish, with an intermixture of rather numerous, very long, erect hairs on head, pronotum and elytra. Head sparsely clothed with appressed hairs; frons closely, irregularly, moderately coarsely punctured, without a well defined, median, longitudinal smooth line; vertex with a large, glabrous, impunctate area at middle, coarsely, closely punctured on each side; antennae barely surpassing middle of elytra, scape very robust, subcylindrical, barely more than twice as long as broad, coarsely, sparsely punctured, second segment one and one-third times as long as broad, third segment about one and three-fourth times as long as second; fifth segment barely longer than fourth, outer segments broad, flattened, expanded. Pronotum about one and one-half times as broad as long, sides a little obtuse, widest before apex, subapical angles obtuse; surface moderately coarsely, shallowly, irregularly punctured, sparsely punctured vitta on each side of disk, post-median, polished, discal area absent; scutellum longer than broad, rounded behind, sparsely clothed with appressed, pale hairs. Elytra indistinctly, shallowly, punctured, moderately densely pubescent except for the numerous irregular, confluent, denuded areas, the largest of which are antemedian, post-median, and subapical; apices broadly, separately rounded. Legs piceous, finely punctured and pubescent; posterior tarsi moderately broad, first segment distinctly shorter than the two following together, second segment at most one and one-half times apical width. Abdomen with sternites moderately densely pubescent at sides, subglabrous at middle; fifth sternite broadly, distinctly emarginate at apex. Length: 8-10 mm.

Female: Larger and more robust than male; antennae attaining only basal one-third of elytra, outer segments more strongly flattened; fifth abdominal tergite truncate at apex; fifth abdominal sternite broadly rounded at apex. Length: 9-12 mm.

Type locality: Cypress Ridge, Marin County, California.

Distribution: Dry foothills of central and northern California (Marin, Sonoma, Napa, and Lake counties).

Host plant: *Cupressus sargentii*.

This species may be readily distinguished from all other known members of the genus by the peculiar structure of the antennae (stout, cylindrical scape and broad, flattened, outer segments), and from all except *chinensis* by the separately rounded elytral apices. Twenty-nine examples have been studied, all beaten or reared from the Sargent Cypress, which grows in only a few limited areas in the dry, serpentine foothills of northern and central California.

ATIMIA MEXICANA Linsley

Atimia mexicana Linsley, 1934, Pan-Pac. Ent., 10: 24.

Female: Form elongate, robust, tapering posteriorly; color dark brown, elytra, abdomen and legs reddish; vestiture coarse, appressed, luteus, pronotum and elytra almost devoid of erect hairs. Head with a narrow, vertical, polished, glabrous and impunctate, median, longitudinal vitta extending from vertex to level of antennal bases; frons and vertex densely clothed with appressed luteus hairs obscuring surface; antennae barely surpassing middle of elytra; scape robust, subconical, barely more than twice as long as broad, second segment one and one-fourth times as long as broad, third segment twice as long as second, fifth segment barely longer than fourth, outer segments cylindrical, not flattened or expanded. Pronotum one-fourth wider than long, sides feebly obtuse, widest near middle, subapical angles distinct, nearly right angular; surface shining, densely clothed with appressed luteus hairs except for four irregularly, sparsely, and very coarsely punctured, sparsely pubescent, straight, longitudinal vittae, the dorsal pair subparallel, approximate, disk without a post-median, polished, glabrous area; scutellum a little wider than long, broadly rounded behind. Elytra gradually narrowed to apical one-third, thence more strongly to apex; surface indistinctly punctured, densely clothed with appressed luteus hairs except for polished, denuded areas; denuded areas numerous, narrow, longitudinal and transverse; apices transversely truncate. Legs reddish, finely punctured and pubescent; posterior tarsi with first segment nearly as long as two following together, second segment one and one-third times as long as apical width. Abdomen with sternites densely clothed with appressed hairs except for four narrow, longitudinal, glabrous, polished, impunctate vittae; fifth tergite broadly

rounded at apex, fifth sternite subtruncate at apex. Length 11-12 mm.

Type locality: Real de Arriba, Mexico.

Distribution: District of Temascaltepec, Mexico.

Host: *Thuja occidentalis*.

Flight period: May.

This species is about the size of *A. dorsalis* Lec., from which it differs in the short third segment of the antennae (only twice as long as second segment), elytral pattern of denuded areas, and truncate elytral apices.

ATIMIA VANDYKEI Linsley, new species

(Plate 14, fig. 8)

Male: Form elongate, moderately robust, gradually tapering posteriorly, color very dark brown; vestiture coarse, dense, appressed, luteus, with scattered, long, erect hairs on head, sides of pronotum, and elytra. Head coarsely, closely punctured except for a large, irregular, glabrous, impunctate area on vertex and a narrow, median, longitudinal polished vitta on frons; neck moderately coarsely, closely punctured on each side of midline; antennae nearly attaining apical one-third of elytra, scape short, robust, about twice as long as broad, second segment one and one-fourth times as long as broad, third segment about one and one-half times as long as second, fifth segment one and one-fourth times as long as fourth, outer segments cylindrical, not expanded or flattened. Pronotum one and one-third times as broad as long, sides obtusely rounded, widest at middle, subapical angles rounded; surface shining, coarsely, closely punctured, densely clothed with appressed hairs except for two arcuate, longitudinal, subglabrous, sparsely punctured vittae and a post-median, discal, polished area; scutellum about as wide as long, broadly rounded posteriorly, densely clothed with luteus hairs. Elytra subparallel to apical one-fourth, thence narrowed to apices; surface moderately finely but not closely punctured, densely clothed with coarse, appressed, luteus hairs except for the denuded areas, denuded areas mostly small, irregular, sub-oval or transverse; apices transversely truncate. Legs dark brown, finely punctured and pubescent; posterior tarsi with first segment nearly as long as two following together, second segment less than one and one-half times as long as apical width. Abdomen with sternites moderately finely but distinctly punctured, densely clothed with appressed luteus hairs at side, subglabrous at middle; fifth sternite broadly, distinctly, emarginate at apex. Length 6.5 mm.

Female: Form more robust than male; antennae attaining only middle of elytra; fifth abdominal tergite rounded at apex, fifth sternite truncate at apex. Length 8.5 mm.

Holotype male (No. 4853 Calif. Acad. Sci., Ent.) from Ft. Wingate, New Mexico, June 9, 1935, allotype female (No. 4854 C. A. S. Ent.), from Gallup, New Mexico, June 6, 1935, and one paratype female (Van Dyke collection, C. A. S., Ent.), from Santa Fe, New Mexico, June 16, 1935. All three specimens were beaten from *Juniperus* by Dr. E. C. Van Dyke, to whom the writer is indebted for the privilege of studying them.

This species is suggestive of *confusa*, but may be readily distinguished by the short, robust antennal scape which is only about twice as long as broad, the short third segment of the antennae which is only one and one-half times as long as the second segment (as compared to two and one-third times as long in *confusa*), the transversely truncate elytral apices, and the shape of the fifth abdominal tergite and sternite of the female which are rounded and truncate respectively.

ATIMIA HOPPINGI Linsley, new species

(Plate 14, fig. 6)

Male: Form moderately elongate, robust, scarcely tapering posteriorly; color black, vestiture coarse, appressed, grayish-white, with scattered long, erect, pale hairs on head, pronotum, and elytra. Head densely clothed with appressed hairs; vertex and frons coarsely, closely punctured, without a large, glabrous, impunctate, polished area; antennae attaining apical one-third of elytra, scape moderately robust, subconical, more than two and one-half times as long as broad, second segment one and one-half times as long as broad, third segment less than twice as long as second, fifth segment but little longer than fourth, outer segments cylindrical, not flattened or conspicuously expanded. Pronotum a little wider than long, sides feebly obtuse, widest before apex, subapical angles obtuse; surface coarsely, more or less regularly punctured, disk sparsely pubescent, without any glabrous, impunctate, longitudinal vittiform areas; scutellum longer than broad, narrowly rounded posteriorly, sparsely pubescent. Elytra rather finely, closely punctured, moderately densely clothed with appressed pale hairs except for denuded areas; denuded areas small, irregular, poorly defined, not forming a distinct pattern; apices transversely truncate. Legs black, finely punctured and pubescent; posterior tarsi moderately broad, first segment distinctly shorter than two following together, second segment about one and one-half times as long as broad. Abdomen with sternites finely, closely punctured, densely clothed with appressed hairs at sides, sparsely at middle; fifth sternite broadly, distinctly emarginate at apex. Length 6 mm.

Female: Larger and more robust than male; antennae not quite attaining middle of elytra; pronotum with sides very obtuse; fifth abdominal tergite and sternite feebly emarginate at apex. Length 9 mm.

Type locality: Mt. Rainier, Washington.

Distribution: Washington and Oregon.

Flight period: July.

Host: *Chamaecypris nootkatensis* (Lamb).

Holotype male and allotype female (collection of R. Hopping), from White R. Camp, Mt. Rainier, Washington, July 27, 1936 and July 30, 1933, respectively, collected by Mr. J. Wilcox. Paratypes, a male and a female, from Santiam National Forest, Oregon, July 20, 1914, on "Alaska Cedar," W. J. Chamberlin collector (collection of California Academy of Sciences).

This species is apparently related to *A. helenae* Linsley, but differs in the slender antennae which are not flattened or expanded apically, uniformly and more finely punctured pronotum, absence of longitudinal vittiform denuded areas on the pronotum and elytra, and transversely truncate elytral apices. The writer is under obligation to his friend Mr. Ralph Hopping for the privilege of studying the first two specimens of this species.

ATIMIA CHINENSIS Linsley, new species

(Plate 14, fig. 3)

Female: Form elongate, moderately robust, gradually tapering posteriorly; color dark brown; vestiture coarse, appressed, luteus, with a few scattered, long, erect hairs on head and sides of pronotum. Head rather densely clothed with appressed hairs; frons coarsely, contiguously punctured except for a short, irregular, polished, glabrous and impunctate median longitudinal vitta between the eyes and antennal bases; neck coarsely and very closely punctured; antennae barely surpassing the middle of the elytra, scape robust, subconical, a little more than twice as long as broad, second segment one and one-fourth times as long as broad, third segment twice as long as second, fifth segment less than one and one-fourth times as long as fourth, outer segments slender, not expanded. Pronotum one and one-fourth times as wide as long, sides feebly obtuse, widest at middle, subapical angles rounded; surface dull, coarsely, very closely punctured, without longitudinal, glabrous, impunctate vittae; appressed hairs dense at sides, sparse on disk; scutellum about as long as wide, rounded behind, moderately pubescent. Elytra narrowed from apical one-third to apex; surface moderately finely punctured and densely clothed with appressed hairs ex-

cept for a narrow, longitudinal, polished, glabrous and impunctate, subsutural vitta and numerous small, rounder or transverse denuded areas; apices broadly, separately rounded. Legs black, finely punctured and pubescent; posterior tarsi with first segment distinctly shorter than two following together, barely one and one-half times as long as second segment. Abdomen with sternites finely, distinctly punctured, clothed with long, appressed, luteus hairs, sparse on disk; fifth tergite feebly emarginate at apex, fifth sternite feebly truncate at apex. Length 6.5 mm.

Holotype female (Musée Heude, Shanghai), from Chusan Isl., Chekiang Province, May 26, 1931, collected by O. Piel, and very kindly submitted to the writer for study by Mr. J. Linsley Gressitt.

In the sculpturing of the pronotum this species is most similar to *A. hoppingi* Linsley, but differs in the short second antennal segment, luteus rather than ashy gray pubescence, narrow, vittiform and transverse, denuded areas of the elytra, and rounded elytral apices. In this latter character it agrees with *helenae* Linsley, from which it may be readily distinguished by the slender antennal segments, absence of pronotal vittae, and dense, luteus pubescence.

Genus PARATIMIA Fisher

Paratimia Fisher, 1915, Proc. Ent. Soc. Wash., 17: 78.

Form elongate, slender, subcylindrical; vestiture moderately coarse, appressed, with an intermixture of long, erect setae on dorsal surface; pronotum, elytra, and abdominal sternites without denuded areas. Head short, broad; eyes emarginate, dorsal and ventral lobes connected posteriorly by about four rows of facets; antennal scape subconical, outer segments flattened and expanded slightly in the female, slender in the male; maxillary palpi with the last segment triangular. Pronotum as long as broad, sides more or less evenly rounded; anterior coxae narrowly separated by the prosternum, intercoxal process less than one-third as wide as coxae, cavities angulated externally. Elytra about two and one-half times as long as broad, slightly narrowed apically; costae not evident; apices separately rounded. Abdomen of female with fifth tergite about twice as long as basal width, broad at base, sides subparallel, apex truncate, fifth sternite about twice as long as fourth, sides subparallel, apex truncate.

Genotype: *Paratimia conicola* Fisher (by original designation).

This genus may be distinguished from *Atimia* by the narrow, cylindrical form, absence of denuded areas from the elytra and pronotum, narrowly separated anterior coxae, triangular ulti-

mate segment of the maxillary palpi, less deeply emarginate eyes, and the long, parallel-sided fifth tergite and sternite of the female. The following is the only known species:

PARATIMIA CONICOLA Fisher

(Plate 14, fig. 2)

Paratimia conicola Fisher, 1915, Proc. Ent. Soc. Wash., 17: 78.
Craighead, 1923, Can. Dept. Agr., Bull. 27: 35 (larva).

Male: Form elongate, very slender, subparallel; color reddish brown; appressed hairs whitish on head, base of pronotum, scutellum along elytral suture, and on ventral surface reddish, erect setae reddish on pronotum, whitish elsewhere. Head moderately densely clothed with appressed hairs, coarsely, closely, but irregularly punctured; antennae attaining apical one-third of elytra, scape subconical, second segment one and one-half times as long as broad, third segment nearly three times as long as second, fifth segment one and one-fourth times as long as fourth, outer segments subcylindrical, not expanded. Pronotum as long as broad, sides obtuse, widest before apex; surface coarsely, rather regularly punctured, moderately densely clothed with appressed hairs which do not entirely obscure the integument; scutellum a little longer than wide, broadly rounded posteriorly. Elytra with sides subparallel to apical one-fourth; surface less closely punctured than pronotum, the punctures varying from nearly one to two diameters apart; reddish hairs moderately sparse; arising from the coarse punctures, white pubescence dense, finer; apices broadly, separately rounded. Legs moderately finely, not closely punctured, moderately sparsely pubescent; posterior tarsi with first segment about as long as the two following together, second segment twice as long as apical width. Abdomen with sternites moderately finely but distinctly punctured, densely clothed with appressed white pubescence; fifth sternite shorter than fourth, broadly emarginate at apex. Length 8-11 mm.

Female: A little more robust than male; antennae attaining middle of elytra, outer segments flattened, expanded; fifth abdominal sternite longer than fourth, truncate at apex. Length 9-13 mm.

Type locality: "Monumental Mines, California."

Distribution: Coast Range Mountains of California (Santa Lucia Mts., Santa Cruz Mts., Napa to Siskiyou and Shasta counties); Josephine County, Oregon.

Hosts: Cones of *Pinus attenuata* and *bolanderi*.

Flight period: March to May.

This species may be readily known by the narrow, cylindrical body form, reddish-brown in color, and narrow, white, sutural elytral stripe. The larva is similar to that of *Atimia dorsalis* but lacks the pronotal pubescence.

P. conicola has long been thought to be restricted to the cones of the knob-cone pine, *Pinus attenuata*. This tree occurs in only a few scattered localities on barren or rocky slopes, and the cones persist on the trunk and branches for several (sometimes fifteen to twenty) years. Recently, however, the species has been taken on *P. bolanderi* along the Mendocino coast (E. C. Van Dyke, A. E. Michelbacher, R. L. Usinger). This suggests that it may utilize the cones of several species of pine. The eggs are deposited at the base of young cones and the larvae feed in the pithy center and in the seeds and scales. Usually more than one larva lives in a cone and occasionally six or seven will successfully mature. On the average, however, only two or three beetles will emerge from a single cone.² Pupation occurs in the fall and transformation occurs almost immediately. Emergence follows in early spring (March and April). The species appears to be very sensitive to temperature changes and if infested cones are brought into a warm room during the winter months, adults will emerge within a few hours. Likewise, in severe winters many adults are killed in their pupal cells.

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² These observations were made upon *Pinus attenuata*, a closed cone species, and may not apply in the case of open cone pines.

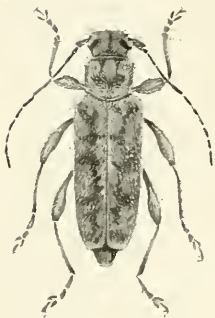
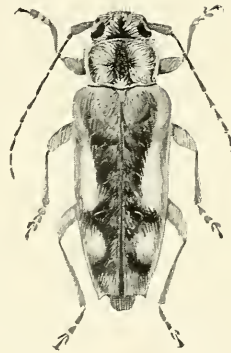


PLATE 14

ATIMINI

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|-------------------------|------------------------|------------------------|
| 1. <i>A. huachucae.</i> | 4. <i>A. dorsalis.</i> | 2. <i>P. conicola.</i> |
| 3. <i>A. chinensis.</i> | 7. <i>A. confusa.</i> | 5. <i>A. helenae.</i> |
| 6. <i>A. hoppingi.</i> | | 8. <i>A. vandykei.</i> |