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# ENTOMOLOGICA AMERICANA

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## A GENERIC SYNOPSIS OF THE FULGORIDÆ.

By WM. H. ASHMEAD.

[Continued from page 141, Vol. IV.]

### FAMILY II. FULGORIDÆ.

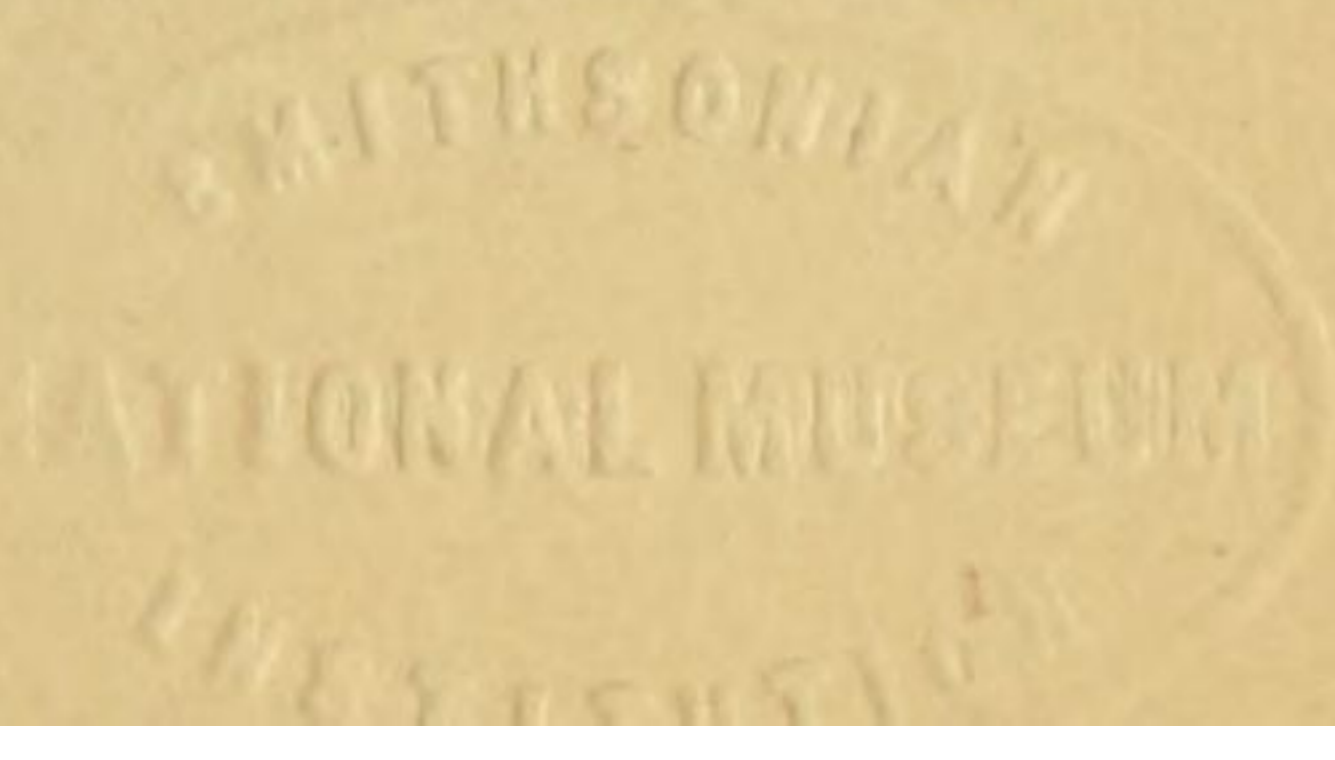
Head of various forms, often with a cephalic prolongation and sometimes luminous. The frons nearly always keeled. Ocelli 2, rarely 3 or wanting, placed beneath the eyes or sunken in the cheeks close to the eye, the third ocellus, when present, placed in the middle of the frons. Antennæ always beneath the eye, usually large, distinct, the joints of which are frequently long and dilated, sometimes with an appendage. Thorax weak, usually keeled; scutellum small. Wings usually long and strongly veined, often short but rarely entirely wanting. Tegulæ most frequently present. Anterior coxæ generally elongated; posterior coxæ transverse, contiguous, extending from the sides of the body. Tibiæ prismatic or foliaceous. Tarsi 3-jointed, generally spined.

This is one of the most extensive of the homopterous families, well represented in North America, and comprises some of the most curious and interesting forms to be found among insects.

The family may be divided into ten subfamilies, recognizable by the aid of the following table:

#### TABLE OF SUBFAMILIES.

- Wings when at rest not lying perpendicular in repose. .... 2.
- Wings when at rest lying perpendicular in repose.
  - External border of elytra without transverse, parallel nervures ..... SUBFAMILY I. ACANONIINÆ.
  - External border of elytra with transverse, parallel nervures.
    - Vertex not separated from the frons by a transverse keel, or greatly prolonged into a point beyond the eyes; clavus at apex usually obtuse and usually confounded with the corium..... SUBFAMILY II. FLATINÆ.
    - Vertex very short, front part narrow or generally rounded before the eyes, separated from the frons by a transverse keel; clavus at apex acute, distinct ..... SUBFAMILY III. RICANIINÆ.



- 2 Frons separated from the cheeks by a sharp margin.
  - Clypeus with marginal keels. . . . . 3.
  - Clypeus without marginal keels, or when keeled anterior legs dilated.
    - Legs simple . . . . . SUBFAMILY IV. **ISSINÆ.**
    - Legs dilated or foliaceous . . . . . SUBFAMILY V. **CALOSCELINÆ.**
- 3 Head not prolonged beyond the eyes into a distinct cephalic prolongation ; or, if prolonged then the anal area not reticulated. . . . . 4.
- Head prolonged beyond the eyes into a more or less distinct cephalic prolongation ; or, if not prolonged then the anal area is reticulated.
  - Prothorax notably shorter and narrower than the mesothorax ; elytra usually transparent and much longer than the abdomen, seldom coriaceous or shortened . . . . . SUBFAMILY VI. **DICTIOPHARINÆ.**
  - Prothorax and mesothorax forming a rhomb nearly as long as broad ; elytra usually horny. . . . . SUBFAMILY VII. **FULGORINÆ.**
- 4 First joint of the hind tarsi without a large movable spur at base . . . . . SUBFAMILY VIII. **CIXIINÆ.**
- First joint of the hind tarsi with a large movable spur at the base . . . . . SUBFAMILY IX. **DELPHACINÆ.**
- Frons not separated from the cheeks by a sharp margin . . . . . SUBFAMILY X. **TETTIGOMETRINÆ.**

SUBFAMILY I. **ACANONIINÆ.**

*TABLE OF GENERA.*

- Vertex long, thorax not covered . . . . . 2.
- Vertex short, thorax covered. . . . . G. 1. **Acanonia**, A. et S.
- 2 Head conical, vertex oblong ; wings semicircular, large. . . . G. 2. **Thiscia**, Stål.
- Head angularly produced.
  - Vertex slightly transverse ; wings outwardly rounded, vertex roundedly truncated . . . . . G. 3. **Philatis**, Stål.
  - Vertex very slightly concave ; wings toward the middle gradually rounded, from thence somewhat narrow, apex truncate. . . . . G. 4. **Chlorochara**, Stål.

SUBFAMILY II. **FLATINÆ.**

*TABLE OF GENERA.*

- Basal joint of the antennæ very small, not easily distinguishable. . . . . 2.
- Basal joint of the antennæ elongated.
  - Basal joint shorter or as long as the second joint.
    - Second joint much longer than the basal . . . . . G. 1. **Phromnia**, Stål.
    - Second joint as long as the basal . . . . . G. 2. **Cerynia**, Stål.
    - Basal joint longer than the second . . . . . G. 3. **Cenestra**, Stål.
- 2 Second antennal joint very long, at least as long as the breadth of the frons. . . . . G. 4. **Delapax**, Spinola.
- Second antennal joint twice as long as broad ; frons without a median keel ; clypeus convex, with a feeble, sharp, median keel towards apex . . . . . G. 5. **Meenoplus**, Fieber.
- Second antennal joint short or somewhat short.
  - Posterior tibiæ unarmed, without spines . . . . . 6.
  - Posterior tibiæ armed, with one spine . . . . . 5.
  - Posterior tibiæ armed, with two spines.

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- Vertex produced with an acute margin, flat or slightly convex.....4.  
Vertex not produced, short, thrice keeled.  
Thorax elevated on the disk, compressed with an acute keel on each side. .3.  
Thorax transversely convex.  
Ocelli distinct.  
Wings with two series of transverse moderately regular veins, the longitudinal vein behind and between these series, simple, not forked.....G. 6. **Dascalia**, Stäl.  
Wings between the clavus at apex and the intercostal longitudinal vein with a regular series of distinct transverse veins, before this series nowhere wanting in irregularly disposed veins, but between the second series, veins regularly transverse; head truncate .....  
G. 7. **Ormenis**, Stäl.  
Wings without series, or then with irregular transverse veins, series in that case not reaching the intercostal vein...G. 8. **Flata**, Fabr.  
Ocelli wanting; transverse veins of wings irregularly arranged.....  
G. 9. **Pæcilopectera**, Latreille.  
3 Veins of wings irregularly transversely arranged ...G. 10. **Sarpanta**, Stäl.  
4 Head triangularly produced; frons flat, convex at base; wings with irregular transverse veins; marginal suture straight, the angle of the suture very longly produced.....G. 11. **Carthaca**, Stäl.  
Corium hardly longer than the clavus.  
Head transversely quadrately produced, anteriorly somewhat roundedly truncated; frons somewhat concave.....G. 12. **Phleboterum**, Stäl.  
Head truncate; wings reaching somewhat beyond the apex of abdomen.....  
G. 13. **Bryllis**, Stäl.  
Corium nearly twice the length of the clavus.  
Wings elongated, narrowed, very gradually narrowed toward the apex.....  
G. 14. **Cyarta**, Walker.  
5 Antennæ somewhat elongated, reaching anteriorly beyond the margins of the cheeks; ocelli subobsolete or wanting.....G. 15. **Copsyrna**, Stäl.  
Antennæ short, distinct.  
Transverse veins of wings irregularly arranged.  
Vertex flat, produced, but the disk of thorax and scutellum not lying in the same plane.....G. 16. **Siphanta**, Stäl.  
Vertex not prominent, but the frons at base prominently gibbous; thorax and scutellum convex.....G. 17. **Gyaria**, Stäl.  
Transverse veins in a regular contiguous series toward apex of wings, between the apex of the clavus and the intercostal veins.....G. 18. **Petrusa**, Stäl.  
Clavus without a distinct transverse vein.  
Wings with an oblique transverse vein before the middle, between the interior ulnar veins and the ramus of the exterior ulnar veins.....  
G. 19. **Atella**, Stäl.  
6 Frons and clypeus without a median keel.....8.  
Frons and clypeus with a median keel.  
Clypeus and frons with a suture between.....7.  
Clypeus and frons without a suture between.  
Vertex triangular with a median keel; mesonotum lozengoidal with a median keel and straight diverging lateral keels; rostrum prolonged nearly between the middle coxæ.....G. 20. **Hemitropis**, Fieber.

- Vertex short, concave ; frons but slightly prominent ; wings from within behind the apex of clavus not enlarged ; clavus from the exterior vein obsoletely granulated .....G. 21. **Lamenia**, Stäl.
- 7 Face straight; side keels of pronotum curving around the eyes. Basal antennal joint very small, annular ; second joint short, cylindrical. Elytra much longer and much narrower than the abdomen, and narrowly rounded at apex. ....  
G. 22. **Haplacha**, Fieber.
- Vertex narrow, quadrangularly elongated ; eyes reniform ; rostrum prolonged between the posterior coxæ .....G. 23. **Myndus**, Stäl.
- Vertex nearly an isosceles triangle ; frons trapezoidal : eyes oval .....  
G. 24. **Trigonocranus**, Fieber.
- 8 Vertex very short, gradually rounded off into the frons ; clavus long, acute, reaching nearly to apex of wings with one longitudinal vein and transverse veins ; wings large, roundedly truncate behind.....G. 25. **Amphiscepa**, Germar.

SUBFAMILY III. **RICANIINÆ.**

*TABLE OF GENERA.*

- Frons with one or three keels or keels wanting ..... 2.
- Frons with two distinct keels, slightly converging toward apex, much longer than broad ; vertex before the eyes distinctly prominent ; lateral margins of clypeus only keeled at base. Wings as broad as long, broadly rounded at apex, with a contiguous series of transverse veins between the apex of clavus and the transverse vein of costal area, the costal area of normal breadth ; the interior vein of the corium forked before the middle.  
Wings vitreous ; posterior tibiæ with three spines.....G. 1. **Miriza**, Stäl.  
Wings opaque ; posterior tibiæ with four spines.....G. 2. **Mindura**, Stäl.
- 2 Lateral margins of clypeus keeled .....5.  
Lateral margins of clypeus not keeled.  
Wings much enlarged toward apex.....4.  
Wings not much enlarged toward apex.  
Wings as broad as long, with a regular series of transverse veins towards apex ; posterior tibiæ with two spines behind the middle...G. 3. **Pricæsa**, Stäl.  
Wings toward apex very gradually enlarged ; posterior tibiæ with three spines behind the middle.....G. 4. **Ricania**, Germar.
- 3 Marginal area with very narrow transverse veins .....4.  
Marginal area with normal transverse veins.  
Longitudinal veins of wings much forked, with two regular series of transverse veins toward apex, joining the apical.....G. 5. **Porchazia**, A. et S.  
Longitudinal veins of wings rarely forked, with two series of irregular transverse veins, remote.... G. 6. **Tarundia**, Stäl.
- 4 Longitudinal veins rarely emitting a forked vein from base of areole, the first forked before the base ; transverse veins very rare .....G. 7. **Armacia**, Stäl.
- 5 Wings nearly two and a half times longer than broad, apex subtruncate ; marginal area with narrow transverse veins ; frons as broad as long.....  
G. 8. **Bladina**, Stäl.
- Wings circular, half as long as broad, apex broadly rounded ; marginal area with broad transverse veins.  
Wings vitreous, transverse veins remote....G. 9. **Nagodina**, Stäl.  
Wings opaque, transverse veins very numerous .....G. 10. **Vutina**, Stäl.

SUBFAMILY IV. **ISSINÆ.**

*TABLE OF GENERA.*

- Wings much shortened, not reaching the tip of abdomen, or rudimentary ; the head produced..... 4.
- Wings not unusually shortened, complete.
- Head produced..... 3.
- Head truncated, before the eyes not or scarcely prominent ; wings strongly decumbent.
- Posterior tibiæ with three spines..... 2.
- Posterior tibiæ with two spines.
- Costa before the middle or anteriorly beneath, very distinctly dilated ; interior ulnar vein simple, exterior ulnar vein and the radial vein near the base, forked ; vertex smooth... G. 1. **Hysteropterum**, A. et S.
- Costa simple beneath towards the base, excepting a very obsolete dilation ; wings behind the apex of the clavus oblique, very obtusely rounded, the interior ulnar vein nearly simple ; first joint of posterior tarsi short... G. 2. **Falcidius**, Stål.
- Thorax at base slightly and broadly sinuated.
- Wings vitreous, regularly reticulated, obtusely rounded at apex ; costa dilated, membrane of costa with transverse veins, ulnar vein in the middle of wing, forked ..... G. 3. **Neæthus**, Stål.
- Wings at apex very slightly deeply angulately emarginated or incised, and rarely with transverse veins, not reticulated ; the vein of the anal area forked ; anterior femora simple, subcompressed..... G. 4. **Thionia**, Stål.
- Wings at apex entire ; frons and clypeus lying nearly in the same plane, the frons somewhat reclining and slightly reflexed G. 5. **Issus**, Fabr.
- 2 Vertex very short, sublunate, anterior margin strongly carinated ; frons rounded, prominent, the central plate almost circular, flattened and very much raised above the surrounding area, exterior margins strongly carinate, curving conformable with the central plate. Pronotum longer than the vertex, lunate, bluntly curved on anterior margin, posterior margin deeply sinuated. Hemelytra long and narrow, a little obliquely rounded at tip, costal and sutural margins nearly straight ..... G. 6. **Aphelonema**, Uhler.
- Vertex subquadrate, deeply scooped out, anterior angles rectangular with bounding keels high, anterior margin arched in the centre ; frons longer than wide, sides convexly curved, middle keel extends  $2\frac{1}{3}$  its length downwards. Pronotum acutely triangular, extending forward almost to front line of eyes, deeply emarginated behind. Hemelytra long and narrow, vitreous, hispid, regularly parabolic on the costal margin, from the base to the inner apical angle, the inner margin straight ; field with a network of large rounded areoles ; costal area obliterated ..... G. 7. **Dictyonissus**, Uhler.
- Abdomen distinctly compressed ; costa remote from the margin ; anterior tibiæ longer than the femora and trochanters together... G. 8. **Tylana**, Stål.
- 3 Costa occupying the same margin, beneath anteriorly or before the middle, dilated ; posterior tibiæ with one spine ..... G. 9. **Mycterodus**, Spinola.
- 4 Wings tailed, apical angle of the commissural produced, slightly curving upwards ; clavus not attaining the apex of the wing. Costa dilated, remote from the margin, dilated part with transverse veins, not inflexed ; posterior tibiæ with two spines ..... G. 10. **Conosimus**, Mulsant.

Vertex before the eyes, produced.

Wings very much shortened, truncated ; frontal disk largely elevated ; thorax anteriorly produced beyond the middle of the eyes . . . . .

G. 11. **Peltonotus**, Mulsant.

Wings oblong, apex extending somewhat beyond the abdomen ; frontal disk not or very slightly elevated ; thorax produced to the middle of the eyes . . . . .

G. 12. **Ommatitotus**, Spinola.

Vertex before the eyes, not prominent ; body cylindrical ; wings much shorter than abdomen.

Frons and vertex forming an obtuse angle, very gradually produced towards apex ; clypeus large, towards the horizontal portion largely inflexed. . . . .

G. 13. **Bruchomorpha**, Newman.

Frons prolonged, globularly enlarged at apex . . . . . G. 14. **Naso**, Fitch.

SUBFAMILY V. **CALOSCELINÆ.**

*TABLE OF GENERA.*

Posterior tibiæ with more than three spines, multispinous . . . . . 2.

Posterior tibiæ with not more than three spines.

Anterior legs strongly dilated, foliaceous.

Posterior tibiæ with one spine . . . . . G. 1. **Caloscelis**, Laporte.

Posterior tibiæ with three spines.

Lateral margins of vertex dilated, elevated . . . . .

G. 2. **Elasmoscelis**, Spinola.

Lateral margins of vertex not dilated, not elevated . . . . .

G. 3. **Lacusa**, Stål.

Anterior femora and tibiæ somewhat dilated.

Head before the eyes prominent ; frons elevated, compressed ; posterior tibiæ with two spines . . . . . G. 4. **Lophops**, Spinola.

2 Clypeus much longer than its breadth at base ; legs long or somewhat lengthened.

Head with a very distinct callosity behind the eyes ; anterior femora and tibiæ slightly compressed, dilated . . . . . G. 5. **Almana**, Stål.

Head without or scarcely with a callosity behind the eyes ; anterior femora alone compressed, body broadly oval ; head somewhat triangularly produced . . . . .

G. 6. **Orgerius**, Stål.

Clypeus a little longer than its breadth at base, legs short, anterior legs compressed . . . . . G. 7. **Risius**, Stål.

[TO BE CONTINUED.]

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**Change of Name.**

In Proc. Cal. Acad., 2nd Series, Vol. 1, issued June 5th, 1888, I described a new genus and species of N. A. Scarabæidæ under the name of *Anoplognatho Dunnianus* but now finding this to be already in use I desire to substitute that of *Aphonides Dunniana*. J. J. RIVERS.

*University of California, Oct. 23, 1888.*