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[Part VI

PART 3.

NEW SPECIES OF CICADIDÆ AND FULGORIDÆ FROM INDIA AND BURMA.

(Hemip.)

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This paper contains the descriptions of fifteen new species of Cicadidæ and Fulgoridæ which are in the collection of the Forest Research Institute, Dehra Dun. The types will be sent to the British Museum when more specimens become available.

CICADIDÆ.

Division POLYNEURABIA.

Platypleura inglisi n. sp.

(Plate I, fig. 1.)

♀ Near to *P. westwoodi* Stål but differs as follows:—

Tegmina: The basal third brownish ochraceous, lighter towards apex, the remainder dark fuscous; basal cell and broad claval area fuscous; two ochraceous spots in radial area, a hyaline spot towards base and apex of 3rd and 4th ulnar areas; a transverse series of hyaline spots, decreasing in size from costa at middle of first ulnar area and ending on middle of posterior margin; some whitish spots near apex

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and three spots on posterior margin; a rather large spot on the posterior margin at middle of last apical area.

Wings bright ochraceous, basal and sub-apical areas (connected on posterior margin) dark castaneous; margins brownish ochraceous with the anal angle light ochraceous.

Length, excl. tegm., 25 mm.

Exp. tegm.: 70 mm.

Hab.: Kurseong, 4,000', Darjeeling.

Described from a single ♀ taken by H. Inglis at Kurseong.

Div. DUNDUBLARIA.

Purana tavoyana n. sp.

(Plate I, fig. 2.)

Opercula in ♂ subtriangular, the posterior margins obtusely rounded. Rostrum reaching apex of first abdominal segment.

Near to *Leptopsaltria quadrituberculata*, Stål, described from Java, the Philippines and China.

Head, pronotum and mesonotum ochraceous, abdomen above castaneous, ocelli ochraceous. Head with lateral striations to face, three pairs of linear fasciæ on vertex and area of ocelli, black. Pronotum with two central linear fasciæ, sinuate and amplified anteriorly and posteriorly, a discal spot on each side, anterior and posterior margins, a large irregular spot on posterior margin near each lateral angle and inner lateral margin, black.

Mesonotum much as in *Leptopsaltria quadrituberculata*, Stål.

Abdomen castaneous with the segmental margins broadly black and a series of small black spots on lateral margins; apical and ventral segments piceous.

Tympanal coverings about as long as broad. Abdomen beneath with the first abdominal segment margined with black and the succeeding segments with fuscous. Tegmina and wings hyaline with bluish reflections in a certain light; venation ochraceous and fuscous; costal membrane ochraceous; post costal area fuscous and a fuscous linear spot on costa near apex of radial area; transverse veins at bases of 2nd, 3rd and 5th apical areas infuscated, the first two broadly, the third slightly, and a series of small spots at apices of longitudinal veins to apical areas, fuscous.

Length: excl. tegm., ♂ 40 mm., ♀ 24 mm.

Exp. tegm.: ♂ 104, mm., ♀ 84 mm.

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Hab.: Tavoy, Burma.

A ♂ and 5 ♀♀ taken by W. S. Wood in Tavoy in September 1925.

Haphsa karenensis n. sp.

(Plate I, fig. 3.)

Rostrum reaches the base of first abdominal segment. Opercula in ♂ reaches base of the penultimate abdominal segment.

♂. Head, pronotum and mesonotum dull ochraceous, abdomen shining ochraceous.

Head with an irregular spot on front, area of ocelli, not reaching posterior margin, a spot at anterior angle of lateral margins, a broad fascia on disc of vertex, connected with posterior margin, and a fascia behind eyes, black. Eyes pale ochraceous.

Pronotum with two central longitudinal fasciæ, connected on posterior margin and widened out on anterior margin; a short transverse discal fascia, the incisures and three spots on lateral margins, the central largest, black.

Mesonotum: a central longitudinal fascia, an irregular curved fascia on each side, an irregular angulated and broken fascia on each lateral area, a large spot on anterior margin, two spots in front of cruciform elevation and the anterior angles of same, black.

Abdomen: a triangular spot on anterior margin of the first segment at its middle, fuscous; the two basal segments ochraceous, the apical segments light castaneous, the margins ochraceous with a series of transverse fuscous spots and fasciæ which become confluent at apex. Body below light ochraceous; a fascia between face and eyes, apex to front, base of clypeus, two large spots on metasternum and apex of rostrum, black. Tegmina and wings hyaline, venation ochraceous, with the transverse veins at 2nd and 3rd apical areas broadly infuscated.

Length: excl. tegm., 23 mm.

Exp. tegm., 88 mm.

Hab.: Karen Hills, Burma.

Described from a single ♂ taken by W. S. Wood at Thandaung, Burma.

Meimuna pallida n. sp.

(Plate I, fig. 4.)

Opercula reaching middle of 4th abdominal segment, their outer margins subparallel, the inner margins oblique, not meeting near posterior coxæ, the apex obtusely angulate.

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Rostrum reaching middle of first abdominal segment. Eyes testaceous; ocelli red.

Body above pale brownish ochraceous; lateral striæ to front, some suffusions on head and vertex, incisures and margins of the central longitudinal fascia to pronotum, dark brownish ochraceous. Mesonotum with two short, fused, central, obconical spots on anterior margin and a wide sublateral fascia, widest at anterior margin and narrowing towards the anterior angles of cruciform elevation, pale castaneous. Abdomen with the segmental margins greenish ochraceous, grayish pilose, with some obscure castaneous spots on lateral margins. Body beneath very pale ochraceous, the abdomen slightly darker.

Legs pale ochraceous, with the tarsi and apex of rostrum pale castaneous.

Tegmina and wings pale hyaline; venation very pale ochraceous; transverse veins at bases of 2nd and 3rd apical areas palely infuscated.

Length: excl. tegm., ♂ 32 mm.

Exp. tegm., 70 mm.

Hab.: Tarakhet, Kumaon, United Provinces.

Div. CIOADATRARIA.

Taungia gen. n.

Easily recognised by the transverse vein at base of 2nd apical area being placed very low down on the submarginal area, thus making the 1st ulnar area the longest, and in the hind wing by having 6 apical areas.

In markings and general appearance it is very like *Rustia dentivitta* (Walk.) but this species has only 5 apical areas to the hind wings and the rostrum reaches the posterior coxæ. Genotype *T. abnormis* n. sp.

Taungia abnormis n. sp.

(Plate I, fig. 5.)

♀ Body above and below brownish ochraceous. Head and pronotum with two central longitudinal fasciæ widened at anterior margin, nearly meeting on disc and widened again near posterior margin, but not meeting on this margin; a short curved discal fascia and the lateral margins, black.

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Mesonotum: with a central lanceolate fascia, two short curved fasciæ on each lateral area, the inner shorter, a spot in front of anterior angles of cruciform elevation and the angles themselves, black.

Abdomen with a large spot on middle of basal segment, a smaller spot on 2nd segment, and a very small one on 3rd segment; a series of large spots on lateral abdominal areas and sides of ventral segment, black. Legs with apex of femora and tibiæ marked with piceous.

Tegmina and wings hyaline; transverse veins at bases of 1st, 2nd, 3rd, 5th and 7th apical areas infuscated, and a series of large spots with light centres from apex along outer margin; veins to apical areas fuscous.

Wings with extreme apex fuscous.

Length: excl. tegm., 14 mm.

Exp. tegm.: 36 mm.

Hab.: Thandaung, Karen Hills, Burma.

Described from a single specimen taken by W. S. Wood at Thandaung.

Div. GÆANARIA.

Balinta sanguiventris n. sp.

(Plate I, fig. 6.)

Near to *Balinta delinenda* Dist., but differs as follows:

♂. Head, pronotum and mesonotum light ochraceous; abdomen above castaneous. Head with apex of front and a transverse fascia from eye to eye and including the ocelli, black. Pronotum with a central fan-shaped fascia from middle of disc, spreading out on anterior margin, two large oblique spots on each side and a spot on each lateral margin, black. Mesonotum: as in *B. delinenda* Dist. Abdomen shining castaneous inclining to sanguineous at base of tympanal covers and along lateral margins; anal process pale sanguineous. Tympanal covers dull castaneous. Body below light ochraceous; legs and opercula dark castaneous; rostrum piceous; abdomen beneath shining castaneous with the last segment and anal appendage, black. Tegmina brownish ochraceous with a bronzy tint; costal membrane bright ochraceous; a light ochraceous costal spot at base of upper ulnar area, a similar spot below and a large spot on middle of posterior margin. Venation brownish. Wings with apical third purplish brown, this colour running up the median and sub-median areas to about a third from base, remainder of wings bright crimson; the posterior margins brown.

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Length: excl. tegm., 22 mm.

Exp. tegm.: 54 mm.

Hab.: Murphuleni, Assam

Described from a single specimen taken by H. Inglis.

Talainga japrona n. sp.

(Plate I, fig. 7.)

This species has no near ally and is quite distinct.

♀. Head, pronotum and mesonotum bright ochraceous, inclining to orange; abdomen above and below, legs and rostrum, black; face bright ochraceous with a black spot on front of head at base of antennæ; eyes brown; a broad black fascia runs from eye to eye, including the ocelli and interior margins of eyes and a linear fascia runs from ocelli to middle of posterior margin.

Pronotum: a linear fascia, slightly widened anteriorly and posteriorly on margins, a large fasciate spot on each side of the disc and the posterior margin, black.

Mesonotum: two central obconical spots with their bases fused, a small obconical spot on either side on anterior margin, these spots joined to a wide fascia on lateral areas; a conical spot from base of cruciform elevation with its apex between the apices of the central obconical spots, a spot at interior angles of cruciform elevation and the apex of same, black. Cruciform elevation light ochraceous. Trochanter with an ochraceous streak on outer margin.

Tegmina fuscous, lighter on the disc, a small white spot at apex of radial area, a large white spot—below this in the ulnar area; claval area whitish towards base. Basal cell dark fuscous; costal vein and area bright ochraceous; post-costal area fuscous. Venation brownish ochraceous. Wings with the apical third pale hyaline washed with fuscous, the margins fuscous, the basal two thirds creamy-white, opaque. Antennæ with basal and three apical joints, black, intermediate joints ochraceous.

Length: excl. tegm., ♀ 23 mm.

Exp. tegm.: 70 mm.

Hab.: Japro, 5,500', Naga Hills.

Described from a single specimen taken at Jakhama, Japro, Naga Hills.

Talainga naga n. sp.

♂ and ♀. Body above and below shining black, eyes brownish-ochraceous, their posterior margins sanguineous.

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Pronotum with the lateral margins and a curved fascia on lateral areas behind eyes sanguineous; posterior margin black. Tegmina talc-like, semi-opaque, ochraceous. Veins black and margined with fuscous; costal membrane and basal cell fuscous. Wings pale bluish-green. Median and submedian veins fuscous. Within the pale area the veins in apical third are black, heavily margined with fuscous. The margin from apical third of costa to the situation near abdominal area, fuscous.

Length: excl. tegm., 24 mm.

Exp. tegm.: 75 mm.

Hab.: Kohima, Naga Hills, 5,000'.

This species is near to *Talaingia binghami* Dist. but differs in having the posterior margin of the pronotum, black and not ochraceous; the tegmina have the costal membrane and basal cell fuscous; the wings have the median and submedian veins fuscous; the veins in apical third are heavily margined with fuscous.

Described from a large series of specimens taken near Kohima, Naga Hills, on the Manipur Road at the end of April 1924.

Div. TAPHURABLA.

Abroma apicalis n. sp.

(Plate I, fig. 9.)

Near *Abroma maculicollis* Guer., but differs as follows:—

♀. Body above castaneous; apex of front, area of ocelli, posterior margins of eyes, an inwardly curved linear fascia from anterior margin of pronotum and reaching to about the middle, a large irregular spot on posterior margin of same, two central obconical spots to the mesonotum, a wide irregular lateral fascia to same, widest at anterior margin and reaching anterior angles of cruciform elevation, and two spots in front of same, black. In some cases the lateral fasciae are joined to the spots in front of cruciform elevation. The four basal abdominal segments broadly margined with black, the apical segments less so.

Body and legs beneath pale ochraceous, abdomen beneath slightly darker with a central series of fuscous spots on segments. Eyes testaceous; tegmina and wings hyaline, the venation on basal area ochraceous, the rest fuscous. Costal membrane green, a fuscous spot at apex of tegmina.

Described from a single ♀.

Length: excl. tegm., 18 mm.

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Exp. tegm.: 58 mm.

Hab.: Dehra Dun.

Div. MELAMPSALTARIA.

Melampsalta inglisi n. sp.

Nearest to *Melampsalta musiva* Dist. but differs as follows:—

♂. Head and posterior margin of eyes, black; ocelli red; a small reddish ochraceous spot on posterior margin; eyes ochraceous. Pronotum reddish ochraceous with the disc, the base of anterior margin, a spot on middle of posterior margin and a spot at each lateral angle, black. Mesonotum with centre of cruciform elevation, black; two spots on disc and the lateral margins reddish ochraceous. Abdomen moderately grayish pilose, the basal segment, black; the remaining segments margined with reddish ochraceous anteriorly.

Body beneath ochraceous, much suffused with black; anterior femora and tibiae piceous streaked with ochraceous; anterior tarsi piceous; intermediate and posterior legs reddish ochraceous, much marked with piceous.

Tegmina and wings hyaline; costal membrane greenish-ochraceous, veins ochraceous and fuscous; apex of claval area fuscous.

Wings with claval area much shaded with fuscous.

Length: excl. tegm., ♂ 15 mm.

Exp. tegm.: 42 mm.

Hab.: Yatung, Tibet.

A single specimen taken by C. M. Inglis in August 1921.

Melampsalta minuta n. sp.

(Plate I, fig. 11.)

Rostrum reaching posterior coxæ. Opercula in ♂ reaching base of abdomen. Front dull castaneous; vertex and a fascia behind eyes, black; ocelli red; eyes dull greenish ochraceous.

Pronotum dull castaneous, with anterior margin and a narrow central longitudinal fascia, light ochraceous, this fascia margined with black and amplified anteriorly and posteriorly; posterior margin light ochraceous, much suffused with piceous and forming a dark collar. Mesonotum light ochraceous with four obconical spots, the two central fused; a wide central fascia from apices of inner obconical spots ending at base of cruciform elevation, where it meets a round spot near each anterior angle of cruciform elevation, and centre of cruciform elevation,

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black. Abdomen castaneous, the basal segment black, the remaining segments narrowly margined with ochraceous; beneath pale ochraceous; face below with clypeus and a fascia between face and eyes, black.

Legs very pale ochraceous, the femora, tibiae and tarsi marked with castaneous.

Opercula whitish ochraceous; rostrum castaneous with the apex, black.

Length: excl. tegm., ♂ 11, ♀ 9 mm.

Exp. tegm.: ♂ 36, ♀ 32 mm.

Hab.: Kanasar, 5,000'—7,000', Chakrata, United Provinces.

Described from a pair taken by Dr. C. F. C. Beeson in June 1923.

The markings on pronotum and mesonotum of this species approach those of *Melampsalta continuata*, Dist., but in size the species is much smaller.

Melampsalta intermedia n. sp.

(Plate I, fig. 12.)

Near to *Melampsalta literata* Dist. but differs as follows:

Head and mesonotum dark castaneous, pronotum and abdomen lighter.

Head with a spot behind ocelli and an obscure central longitudinal line to pronotum, and its lateral margins pale ochraceous. Abdomen castaneous with the posterior margins black. Face beneath dark castaneous; body beneath ochraceous. Legs ochraceous heavily marked with castaneous; abdomen beneath brownish ochraceous.

Tegmina and wings semihyaline; costal membrane brownish ochraceous; venation ochraceous; bases of tegmina and wings narrowly reddish ochraceous.

Length: excl. tegm., ♀ 15 mm.

Exp. tegm.: ♀ 40 mm.

Hab.: Kotkhai, Simla Hill States, Punjab.

Described from a single specimen taken by B. M. Bhatia during May 1924.

Fam. FULGORIDÆ.

Sub-fam. FULGORINÆ.

Fulgora woodi n. sp.

(Plate I, fig. 13.)

Head and upper surface of cephalic process piceous for about two-thirds of its length, with some scattered cretaceous spots; below dull

reddish ochraceous; the apex globose and shining ochraceous. Pronotum and mesonotum ochraceous, whitishly tomentose. Prothorax with a spot on anterior margin and two spots on disc, black. Mesonotum with two large rounded spots, on anterior margin, placed close together; a spot on each lateral margins and two spots on lateral areas, black.

Abdomen ochraceous heavily marked with black on segments and tomentously suffused with white. Sternum and abdomen beneath, reddish ochraceous; legs piceous, whitishly tomentose; last two abdominal segments, beneath, piceous. Tegmina fuscous with the basal half cretaceously tomentose and ornamented with piceous and fuscous spots, differing in size and shape; the apical half with a number of cretaceous spots with pale ochraceous centres, these spots becoming smaller as they approach the apex.

Wings pale green with the apical third fuscous.

Length: Ceph. process, angle from apex to eyes, 14 mm.

Eyes to apex of abdomen 21 mm.

Exp. tegm.: 80 mm.

Hab.: Tavoy; Karen Hills, Burma.

Described from two specimens taken one at Tavoy, and one in the Karen Hills. Very near to *Fulgora clavata*, West., but differs as shown above.

Saiva phesamensis n. sp.

(Plate I, fig. 14.)

Apex of cephalic process moderately thickened.]

Head including cephalic process greenish-olivaceous; thorax lighter; cephalic process and head much spotted with bluish white, those on the head smaller and closer together; apex of cephalic process with a large black spot. Pronotum unmarked; mesonotum with a round black spot at middle of lateral margins. Abdomen bluish-green, somewhat cretaceous. Tegmina bright yellow the venation and reticulation green, covered with deeper yellow spots, the spots margined in front with black; the spots are rather evenly distributed and run in parallel lines across the tegmina. Wings pale bluish-green, unmarked, the venation and reticulation whitish. Eyes pale brown. Legs greenish ochraceous; fore and middle tarsi and last joint of hind tarsi, fuscous. Head and thorax beneath greenish ochraceous; abdomen whitish.

Length: Expanse tegmina, 57 mm.

Eye to apex of cephalic process, 15 mm.

Hab.: Naga Hills, Assam.

Described from a single specimen taken during October 1927. This species is near *Saiva nodata*, Dist. but differs much as shown above.

Div. APHANARIA.

Limois bifasciatus n. sp.

♂. Near to *L. westwoodi* (Hope) but is a smaller insect.

Head and pronotum as in *westwoodi*; mesonotum ochraceous, with a spot on either side of the ridge at interior margin and a hook shaped spot on each lateral area, dark fuscous. Abdomen pale castaneous with segmental margins, fuscous. Body beneath and legs fuscous, the latter annulated with dull ochraceous; rostrum pale fuscous. Tegmina with less than basal half and costal area pale olivaceous, opaque; a broad irregular bent fascia extending from costal area and ending on posterior margin; an oblique narrow fascia from apex to disc, but not meeting the first fascia. Wings much as in *westwoodi*.

Length: excl. tegm., 10 mm.

Exp. tegm.: 42 mm.

Hab.: Mussoorie, 6,000' United Provinces.

Described from a single specimen taken at Mussoorie.

EXPLANATION OF PLATE I.

1. *Platypleura inglisi*, ♀, n. sp.
2. *Purana tavoyana*, ♂, n. sp.
3. *Haphsa karenensis*, ♂, n. sp.
4. *Meimuna pallida*, ♂, n. sp.
5. *Taungia abnormis*, ♀, n. sp.
6. *Balinta sanguiventris*, ♂, n. sp.
7. *Talainga japonica*, ♀, n. sp.
8. *Abroma apicalis*, ♀, n. sp.
9. *Melampsalla minuta*, ♂, n. sp.
10. *Melampsalla intermedia*, ♀, n. sp.
11. *Fulgora woodi*, ♂, n. sp.
12. *Saiva pbesamensis*, ♂, n. sp.

NOTE.—The figures are drawn to natural size. [Figures 8 and 10 are not represented.] The colour values in this plate are not satisfactory and may be judged from figs. 3 and 12 which were drawn in black and white in the original.

Ollenbach :—New Cicadidae and Fulgoridae.

Plate I.

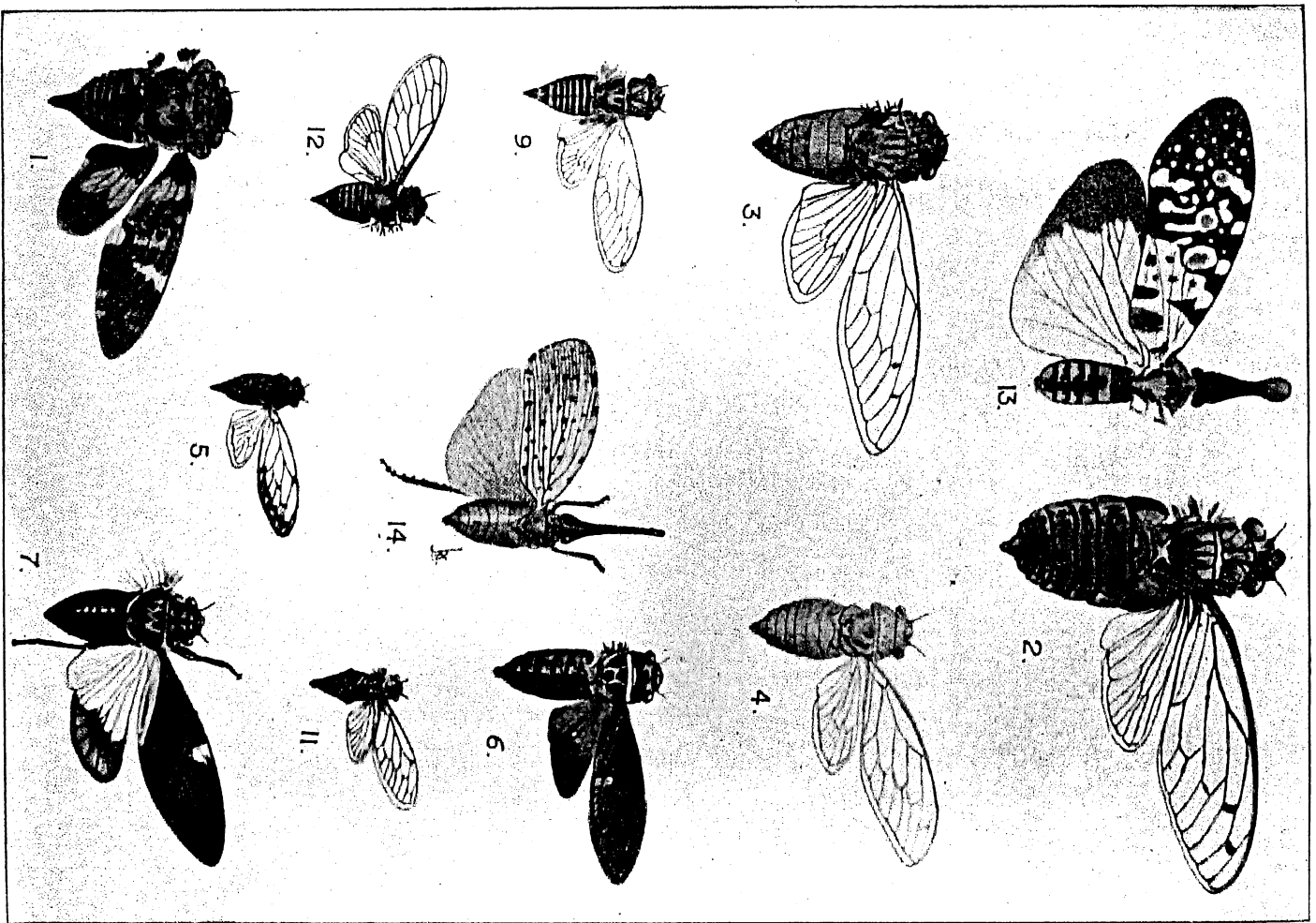


Photo-Muehl. & Jilke Dept., Thomason College, Roanoke.