



<https://www.biodiversitylibrary.org/>

Natural history of Victoria : Prodomus of the zoology of Victoria, or, figures and descriptions of the living species of all classes of the Victorian indigenous animals

Melbourne : By authority: J. Ferres, government printer ; 1885-1890.

<https://www.biodiversitylibrary.org/bibliography/64074>

v.2:Decade 11-15 (1890):

<https://www.biodiversitylibrary.org/item/24070>

Page(s): Plate 119, Page 75, Page 76

Holding Institution: MBLWHOI Library

Sponsored by: MBLWHOI Library

Generated 6 February 2022 6:51 PM

<https://www.biodiversitylibrary.org/pdf4/1430381i00024070.pdf>

This page intentionally left blank.

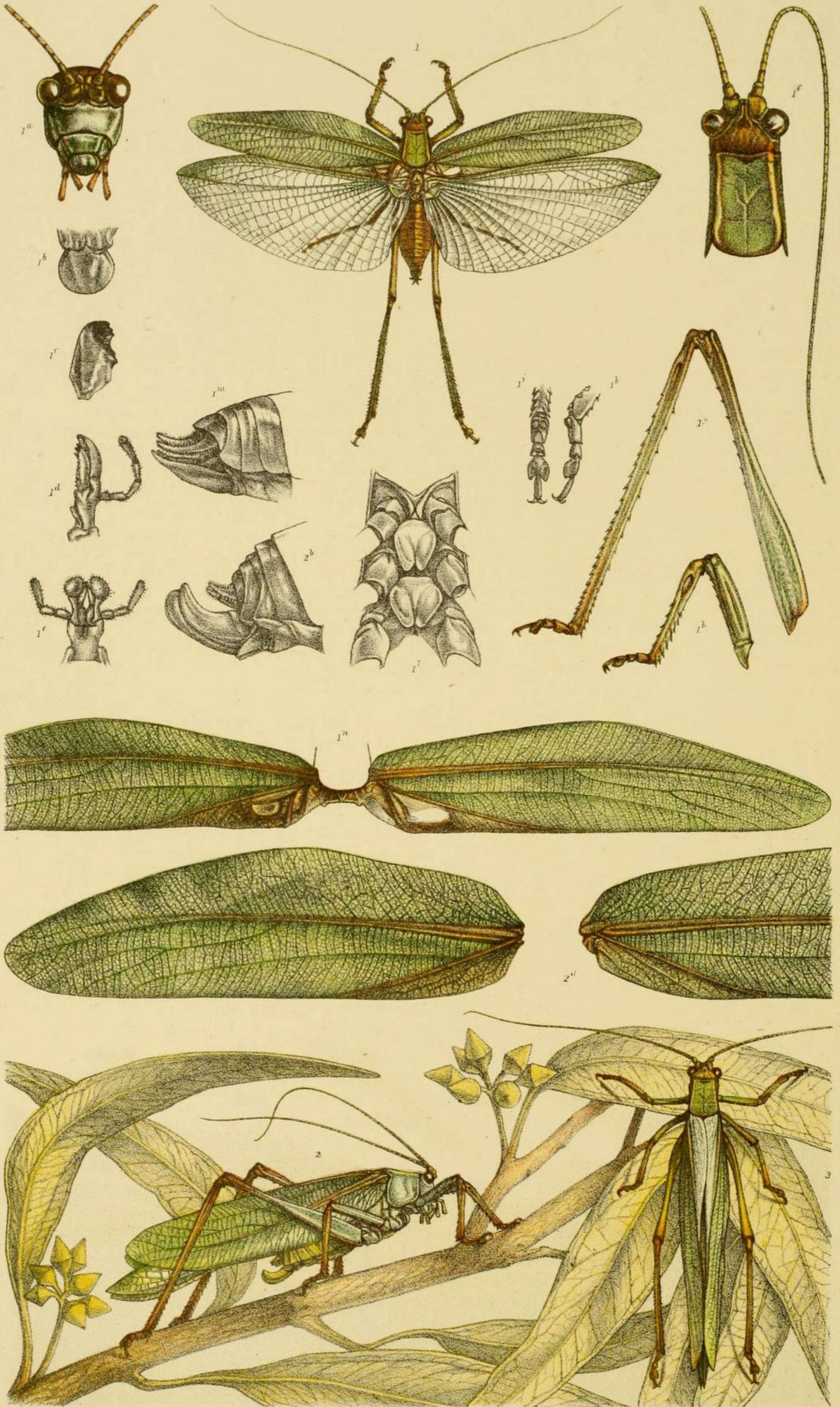


PLATE 119.

PHANEROPTERA VALIDA (WALK.).

THE SMALLER GREEN GUM-TREE GRASSHOPPER.

[Genus PHANEROPTERA (AUD. SERV.) (Sub-kingd. Articulata. Class Insecta. Order Orthoptera.* Section Saltatoria. Family Gryllidæ.)

Gen. Char.—Head small, narrow, oval, vertical; antennæ close together at base, longer than the body, setaceous, multiarticulate, first joint large, elongate, second spheroidal, capillary from the third joint; eyes small, prominent; no ocelli; labrum small, rounded; mandibles moderate, slender; maxillary palpi with last joint twice as long as that of labial palpi, both truncated at tip. Legs long, slender; posterior femora very long, smooth; tibiæ long; spines of legs few and small; anterior tibiæ with a basal swelling, having a distinct oval cavity; tarsi 4-jointed, third joint narrow, bilobed. Elytra long, narrow, extending beyond the abdomen when at rest, and having large stridulating organ on inner base in the males; wings large, extending beyond the elytra. Prothorax short, flat or concave above, posterior edge sometimes raised; presternum smooth; mesosternum and metasternum concave, with raised lateral borders. Abdomen narrow; subanal plate of male bifurcate at tip, the two branches extending beyond the abdomen; two upper appendages long, setaceous, pubescent, those of the male a little arched upwards, and much larger than in the female; ovipositor very short, arched upwards from base, rounded at tip; valves flat, smooth above.

Sub-genus, *Phaneroptera* proper: Prothorax oblong, nearly parallel-sided and flat above, keeled at sides where deflected; legs and thighs nearly smooth.]

DESCRIPTION.—*Male*: Head brown, with green tinge; eyes very prominent, greenish-brown; antennæ very slender, pale brown; prothorax with a flat or slightly concave, oblong disc, sides bent down at right angles with a strong, straight, pale-yellowish keel on each side at the flexure; rest of the surface pea-green; anterior margin slightly concave, posterior edge convex. Presternum narrow, sulcate along middle, meso- and meta- sternum broader, slightly convex with raised lateral edges, deeply bilobed behind. Upper abdominal appendages long, slightly curved upwards; lower pair very short. Legs very long, slender; femora and tibiæ with few very minute spines, proximal half of hind femora moderately thickened; anterior pair of tibiæ dilated at base for oval drum cavity; all the legs pale brown, except thick part of hind femora, which are green on outer side. Tegmina, or anterior wings, narrow, about 2 lines shorter than posterior wings when at rest; larger areolets irregular, not distinctly marked; pea-green, except the large triangular part of inner base carrying the iridescent, transparent, stridulating spots, which are pale brown. Hind wings colorless, with pale pink and green iridescent reflection; a triangular, opaque, pea-green spot, 2 lines long, on anterior half of apex (which opaque green portion projects beyond the tegmina when at rest); abdomen brown above, green below; tibiæ, tarsi, distal half of hind thighs and palpi, pale brown; angle at sides of thorax, continued by inner or posterior veins of tegmina, when at rest, pale yellowish. Expanse of tegmina, 3 ins. 1 line; length of body, 1 in. Proportional measurements: Length of lower wings, 1 in. 6 lines, taken as unity; length of anterior wings, or tegmina, $\frac{1.00}{1.00}$; width of tegmina, $\frac{.9}{1.00}$; length of prothorax, $\frac{1.6}{1.00}$; width of prothorax, $\frac{1.2}{1.00}$; length of abdomen, $\frac{4.0}{1.00}$; length of antennæ, $\frac{9.9}{1.00}$; hind femora, $\frac{6.0}{1.00}$; hind tibiæ, $\frac{6.5}{1.00}$. *Female*: General structure

* Although the name *Dermaptera* has some claims to priority for this Order, I have used *Orthoptera*, as employed by so many writers upon the group.

and color like male, except inner bases of tegmina, which are green, and finely reticulated like the rest. Length of tegmina, 1 in. 7 lines; length of body, 1 in. 1 line.

REFERENCE.—Cat. Derm. Salt., Pt. 2, p. 352.

The *Phaneropteræ* are the most elegantly slender of all the *Gryllidæ*, not only the small head and narrow body, but the narrowness of the anterior pair of wings (or tegmina, or elytra) aiding this characteristic appearance. The distance the hind wings project behind the tips of the tegmina when at rest, and the great length of the abdominal appendages of the male, are also peculiarities. The subanal plate of the male is sometimes double, in other species only bifurcate at tip; it is usually curved upwards. The shortness of the ovipositors of the female separates the *Phaneropteræ* at a glance from *Locustidæ*.

Like all the *Phaneropteræ*, the posterior wings when folded extend like a tail beyond the ends of the elytra or anterior wings when at rest, the exposed tips being usually colored like the elytra and of the same consistence, differing in these respects from the transparent membranous rest of the wing.

This species is common on young gum trees near Melbourne, the tint of which it so closely agrees with that it is by no means easy to detect the individuals loudly shirring or chirping on all sides of the observer.

It has not been figured before.

EXPLANATION OF FIGURES.

PLATE 119.—Fig. 1, male, natural size, in flying position. Fig. 1*a*, front view of head, magnified 3 diameters, showing absence of ocelli and form of front. Fig. 1*b*, labrum, or upper lip, showing its simple rounded edge, magnified 5 diameters. Fig. 1*c*, one of the strong cutting mandibles, magnified 5 diameters. Fig. 1*d*, one of the slender maxillæ, showing the hood over the serrated terminal joint and the maxillary palpi. Fig. 1*e*, labium, or under lip, showing its terminations and palpi, magnified 5 diameters. Fig. 1*f*, head and thorax viewed from above, magnified 3 diameters, showing the flat oblong disc, with the rectangularly-deflected sides. Fig. 1*g*, hind leg, magnified 2 diameters. Fig. 1*h*, anterior leg, showing swelling and drum cavity in base of tibia. Fig. 1*i*, tarsus viewed from below, magnified 3 diameters, to show the bilobed third joint. Fig. 1*k*, ditto, viewed from the side. Fig. 1*l*, sternum, to show the bilobed middle and hinder pieces, magnified 3 diameters. Fig. 1*m*, anal plate and appendages of end of abdomen of male, magnified 3 diameters. Fig. 1*n*, elytra, magnified two diameters, showing the neuration and large, clear stridulating organs at base. Fig. 2, female, viewed in profile, with the wings at rest, to show the projection of the wings behind the tips of the elytra, and the extension of both far behind the end of the abdomen. Fig. 2*a*, elytra, or tegmina, magnified 2 diameters, to contrast the neuration with that of the male, and to show the absence in the female of the transparent stridulating spaces at base. Fig. 2*b*, side view of plates of ovipositor and appendages at end of abdomen of female, magnified 3 diameters. Fig. 3, another specimen, in the walking position, seen from above, to show the overlapping of the left elytron.

FREDERICK McCOY.