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Fig. 4, 5, 6, *Lycaena sonorensis* Rehn, *Nemobius*, Calif.

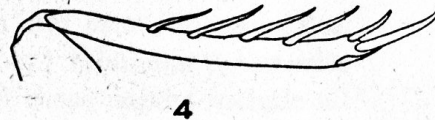
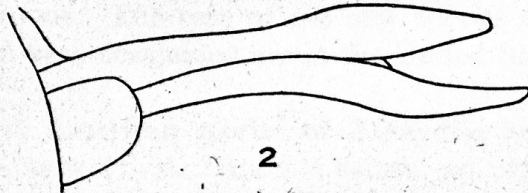
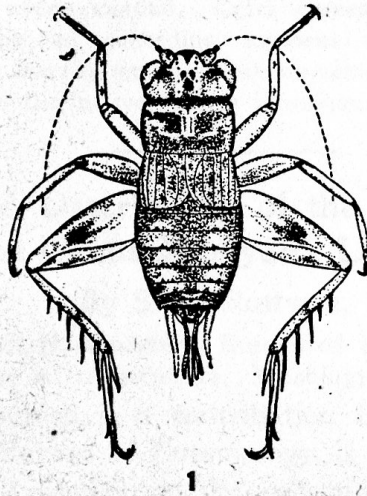
A New Species of the Genus *Nemobius* from California (Orthoptera; Gryllidae; Gryllinae).

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*Nemobius eurynotus*¹ new species.

The present remarkable species is readily separable from any other of the genus found in the United States by its large size, broad form, general coloration, subobsolete ocelli and extremely short ovipositor, which in proportionate brevity is only equalled by that of *N. carolinus brevicaudus* Bruner. The unequal disto-ventral pair of caudal tibial spurs, however, show the position of the species to be in the first section of the North American forms of the genus and, though very widely separated, it should be placed after *N. panteli* Hebard. Additional material is, in our opinion, necessary to determine whether the present insect should be placed in the same subgenus as that species, *Brachynemobius*, or should be assigned to a distinct and yet undescribed subgenus.

¹ From *εὐρύνωτος* = broad backed.

The general appearance of the present insect resembles rather a diminutive and brilliantly colored example of *Miogryllus verticalis* (Serville), than any species of the genus



Type of *Nemobius eurynotus* new species.

Fig. 1.—Dorsal view of insect. (x 4.)

Fig. 2.—Lateral outline of ovipositor. (Greatly enlarged.)

Fig. 3.—Latero-internal outline of caudal tibia and tarsus showing spines and spurs (Greatly enlarged.)

Fig. 4.—Latero-external outline of caudal tibia showing spines and spurs. (Greatly enlarged.)

Nemobius in the collections. The color pattern is, however, distinctive, while the excellent characters for the Group *Nemobiites* prevent any possible confusion with the species of *Miogryllus*.

Type: ♀; Berkeley, California. November 18 to 20, 1906. (J. C. Bradley.) [Hebard Collection, Type No. 472.]

Size large for the genus, larger than any of the North American species except *N. (Argizala) brasiliensis* (Walker); form very robust; surface shining; head and pronotum with hairs reduced in number. Head large, very full and rounded, about as wide as pronotum, width slightly but distinctly greater than depth. Ocelli subobsolete, indicated by inconspicuous minute spots, the surface at these points showing no convexity. Eyes slightly less ample in proportion to size of head than in other North American species. Maxillary palpi as normal for North American species. Pronotal proportions intermediate between those of *panteli* and *brasiliensis*, length distinctly more than half of width. Tegmina much reduced, very slightly longer than pronotum, slightly the more produced at humeral angle, the margin there broadly rounded, the distal margin thence weakly oblique to the very broadly rounded sutural angle; longitudinal veins conspicuous, cross-veinlets very few. Wings probably absent. Ovipositor very short and heavy, about as long as caudal metatarsus, straight.² Subgenital plate small, scoop-shaped, the free margin divided into two evenly convex portions, the juncture of which forms a median acute-angulate emargination. Caudal tibia with four internal and four external dorsal spines, which are rather short and heavy for the genus, much as in *panteli*; these have their ventral surfaces concave, with margins microscopically and very minutely serrulate. Caudal tibia with three pairs of distal spurs, of which the ventral pair are unequal in length; longest, dorso-internal spur, two-thirds as long as metatarsus.

Length of body 10., pronotum 1.95, exposed portion of tegmen 2.15, ovipositor 2.35, caudal femur 5.5, caudal tibia 4.2. Width of head 3., pronotum 3., dorsal field of tegmen 2., abdomen at widest point 3.3, caudal femur 2.1 mm.

General coloration shining mummy brown and ochraceous-orange. Head with occiput ochraceous-orange, washed with mars brown caudad of lateral ocellar areas and between these flecks, mesad, supplied with three nearly attingent smaller flecks of the same color;

²The valves are distorted distad, each separating from the others, as has been observed in other species of *Nemobius* (see Hebard, Proc. Acad. Nat. Sci., Phila., 1913, p. 453, footnote 51, [1913]), and are apparently much worn, no trace of teeth being found.

interantennal protuberance, face and mouth parts rich blackish chestnut-brown. Maxillary palpi ochraceous-tawny, distal fifth of ultimate joint mummy brown. Pronotum blackish brown with an intricate pattern of ochraceous-tawny. Tegmina mummy brown, the veins dark, tinged with chestnut. Abdomen blackish brown, each dorsal segment with a pair of large cinnamon, irregularly trapezoidal markings which widen caudad. Cerci cinnamon. Subgenital plate and median portion of preceding segment cinnamon-buff. Limbs ochraceous-tawny, heavily washed with cinnamon brown.

The type of this distinctive species is unique.
