

method was made by first removing those parasites that could be seen upon a careful examination and then carefully brushing the specimen to remove any additional parasites. Following both of these treatments the skins were dissolved in caustic potash, and in all instances many additional parasites were recovered.

Hopkins' procedure involves initially soaking the skin of the mammalian host in cold 5% KOH for 15 minutes, after which the hair is scraped from the skin and the skin discarded. This particular step is rather tedious and some parasite specimens are likely to be lost by adhering to the skin. With over 400 dried skins to examine in the investigation noted above, the amount of time spent in scraping the hair from the skin became excessive. The following modification was then adopted with excellent results. Further, this procedure eliminates one of the possible sources of error in sampling the population of the ectoparasites. It should be noted, of course, that these results were obtained with the dried skins of small rodents: *Clethrionomys*, *Microtus* and *Peromyscus*. Whether or not it would be effective with larger animals is uncertain.

Dried skins are cut into small pieces (1 to 2 inches square) and placed in a 125 ml. Erlenmeyer flask with 50 ml. of 3% trypsin (4 × U. S. P. pancreatin) buffered to a pH  $8.3 \pm$  with .2 molar  $\text{Na}_2\text{HPO}_4$ . This is placed in an oven at 37° C. for 36 to 48 hrs. Following this initial digesting period, 10 gm. KOH and 50 ml.  $\text{H}_2\text{O}$  are added, and the resulting mixture is boiled for several minutes or until all of the hair and the skin have dissolved. This liquid is then strained through an 80 mesh bronze screen (folded to a conical form). The small amount of debris remaining on the sieve is washed gently with tap water and the screen inverted into a petri dish. The specimens are washed off the screen into the dish by a small stream of water from a washing bottle or the tap. Any parasite specimens still adhering to the screen are found by examination of the screen under a dissecting microscope. The specimens, now in the dish with very little debris, can be readily discerned at 15 × with a dissecting microscope. First instar nymphs of

the Anoplura as well as all larger instars are retained completely by the screen. Mites are also recovered by this process; even the Listrophoridae although these are so small that some do pass through the 80 mesh screen. With this modification 20 or 30 skins can be brought through their initial digesting with much less time and effort than that involved in skin scraping, and no lice are lost in the process.

The parasite specimens are largely cleared by this process, and aside from some manipulation to remove the dissolved body contents, they are ready for staining and mounting in appropriate media. Lice and mites prepared in this fashion are undamaged and make excellent mounts. The latter is not the case where prolonged boiling of the skins in caustic potash has been attempted nor where heat and pressure have been used to digest the skins.

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### A *Frigartus* from California and an *Erythroneura* from South Dakota (Homoptera: Cicadellidae)

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***Frigartus obesus* n. sp.** Figures 2, 3, 5, 6.

Resembling *Frigartus frigidus* (Ball)\* but longer, less robust, and with smaller median spots on vertex and dark basal angles of scutellum.

Robust, cream-colored, marked with black and brown. Head broadly rounded to front, margins almost parallel, a large round spot between ocellus and eye on anterior margin, another comma-shaped, smaller spot either side on apex, small irregular spots and lines along base, eyes dark. Pronotum pale anteriorly, with sparse transverse lines on posterior two-thirds; scutellum pale with a black triangle in each basal angle, and

\* BALL, E. D., Ent. News 10: 172, 1899.

small triangular spot either side below median transverse impressed line. Elytral veins broadly pale, cells embrowned, apical cells darker. Below, face pale with seven short arcs either side, sutures and spot above antenna dark.

♂.—Valve short, blunt; plates broader than valve at base, long, narrowing gradually on sides to sharp appressed tips, covering pygofer, twice as long as valve. Inner genitalia as illustrated.

♀.—Last ventral segment longer than preceding, margin straight, slightly excavated on median two-thirds between produced sides.

Length: ♂ 4.1 mm.; ♀ 4.5 mm.

Described from specimens collected in CALIFORNIA by D. J. & J. N. Knull. ♂ *holotype* and 3 ♂ *paratypes*, *allotype* and 1 ♀ *paratype*, Chester, July 1, 1951; and 1 ♀ *paratype*, Clear Lake, June 18, 1941. Types to be deposited in the Collection of The Ohio State University.

**Erythroneura (Erythridula) pura** n. sp. Figures 1, 4.

In form of inner ♂ genitalia near *E. (E.) nitida* Beamer,† but style with a longer, narrower posterior point.

Small, ground color cream on vertex, pronotum and body, of elytra white; color markings scarlet. Vertex with inverted V not touching eyes, narrower at apex; continued across pronotum as broad, slightly diverging irregular vittae reaching both margins; scutellum white, basal angles narrowly outlined with orange except basally, and apex orange; claval stripe broad in basal two-thirds, narrowly following suture in apical third to apex, corial vitta narrow, costal margin orange-tinted before plaque, apices slightly smoky.

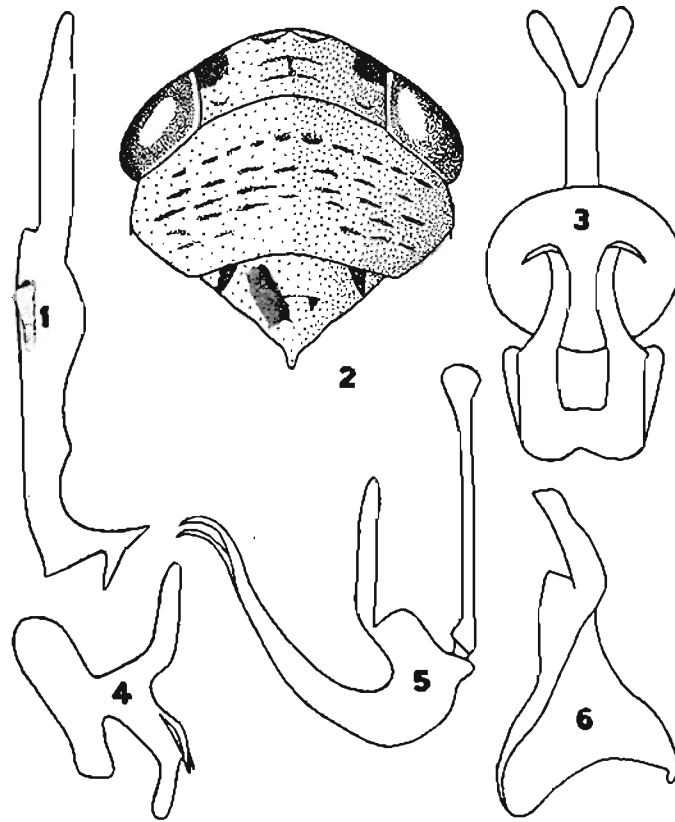
Inner ♂ genitalia as illustrated.

Length: ♂ 2.6 mm.; ♀ 2.7 mm.

A large series, ♂ *holotype*, *allotype* and *paratypes* of both sexes collected in SOUTH DAKOTA by Dr. H. C. Severin at Spearfish, Sept. 10, 1948. Other paratypes from Badlands, Wall, July 26, 1948; Elk Point, Sept. 14, 1948; Ft. Pierre, June

† BEAMER, R. H., Journ. Kans. Ent. Soc. 8: 103, 1935.

17, 1947 and Aug. 6, 1948; Hot Springs, Sept. 11, 1948; Lead, Sept. 11, 1948; Martin, Sept. 11, 1948; Springfield, Sept. 18, 1948. Holotype, allotype and paratypes in collection of writer, paratypes to be deposited in collections of Dr. Severin and The Ohio State University.



FIGURES 1-6

1. *Erythroncura (Erythridula) pura* n. sp., lateral view of style.
2. *Frigartus obesus* n. sp., head, pronotum, scutellum.
3. *Frigartus obesus* n. sp., ventral view of aedeagus.
4. *Erythroncura (Erythridula) pura* n. sp., lateral view of aedeagus.
5. *Frigartus obesus* n. sp., lateral view of aedeagus.
6. *Frigartus obesus* n. sp. style.