

# CORRELATION OF HOST PLANT AND COLOR PATTERN OF *RHODOBAENUS TREDECIMPUNCTATUS* (ILL.) (COLEOPTERA, RHYNCHOPHORIDAE)\*

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The cocklebur billbug, *Rhodobaenus tredecimpunctatus* (Ill.) varies strikingly in color from black with narrow red patches to red with small black spots. According to Blatchley and Leng (1916), and Weiss and Lott (1923), it occurs throughout the United States and feeds upon a host of plants, mostly composites. One variety, *quinquepunctatus* (Say), mainly black, is found on a species of thistle in southern states. Another variety, *pulchellus* (Shön) (fig. 1, D) is

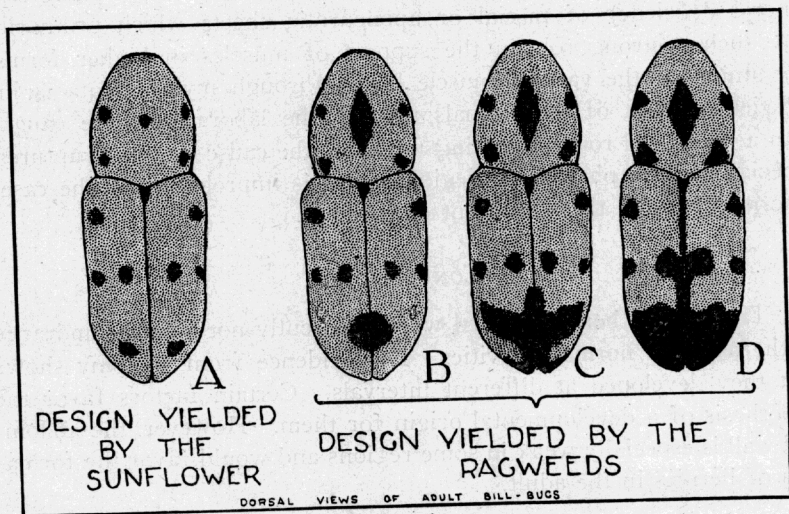


FIG. 1

common everywhere with the typical form *R. t. tredecimpunctatus* (fig. 1, A, B, and C). Observations of the writer indicate that color pattern of the adult may vary with host plant of the larva and that the varietal name, *R. t. pulchellus* (Schön), applied to individuals having the tip of the elytra entirely black, might well be dropped.

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Fifteen individuals were cut from their larval burrows in stalks of the sunflower, *Helianthus grossesserratus*, during the years 1928, 1929, and 1930. All are dorsally red with small rounded spots (fig. 1, A).

Twenty individuals were taken from their larval burrows in stalks of the giant and common ragweeds, *Ambrosia trifida* and *A. artemisiifolia* during the same years. They vary greatly in design as shown by figure 1, B, C, and D, but the median prothoracic spot is distinctly elongate, usually diamond-shaped, and the caudal spots on the elytra are fused. The figures show the extremes of variation.

It is evident that the varietal name *pulchellus* (Schön) implies a division where none exists, for every degree of intergradation is found between the forms illustrated in B, C, and D. If a distinct division of color pattern exists it is between the design yielded by the sunflowers and that yielded by ragweeds as a group, but the possibility that the many larval hosts determine adult designs makes obvious experiments more profitable than the shifting of names.

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