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NOTES ON SOME FEEDING AND HIBERNATION HABITS OF CALIFORNIA POLISTES

(Hymenoptera-Vespidae)

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In May, 1939, on the sand dunes near Antioch, California, I noticed a pile of fermenting grapes upon which hundreds of the orange and yellow paper wasp, Polistes fuscatus anaheimensis (Provancher), were feeding. Surprisingly the black and yellow Polistes fuscatus aurifer (Saussure) were flying around valley live oak trees only a few yards away together with anaheimensis and in somewhat greater abundance. No aurifer even approached the grapes.

Along Putah Creek near Davis, California, both Polistes hibernate in large patches beneath the loose bark of dead and dying cottonwood trees. Here, although they can be found beneath the same strip of bark, they tend to segregate into discreet patches with only an occasional specimen of anaheimensis quartered with aurifer.

At the above localities parasitism of Polistes by the strepsipteran, Xenos peckii kirby, is frequent but nearly confined to aurifer. Of the several hundred Strepsiptera extracted from two quarts of about equal numbers of both kinds of wasps, less than ten were found in anaheimensis.

These observations indicate that the two Polistes, which are apparently morphologically identical except for color and a slight size difference, are physiologically quite different and can live side by side as distinct species. Although in general anaheimensis prefers warmer, dryer areas than aurifer, in the areas where they are found together, as at Antioch, no intergradation is observable. Perhaps a thorough study of the distribution and habits of our various species and races of Polistes together with an analysis of their intraspecific variation would shed some additional light on the perplexing problem of species with only "physiological" isolating mechanisms.

1/ Copied from The Pan Pacific Entomologist (Vol. XVIII, No. 1: 30)