VESPID WASPS (*EUMENES CURVATA*)
ATTRACTED TO SMOKE

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Smoke is not ordinarily attractive to insects, but certain flies of the family of Clythiidae have been noted by several entomologists to be strongly attracted by the smoke from burning weeds or even by chimney smoke. Kessel has recently published an account¹ of the American smoke flies which belong to the genus *Microsania*. The genus is represented by several species in Europe, two in North America, and others in Australia, New Zealand and equatorial Africa. From Kessel's account of his own observations made in California and his well documented summary of observations reported by others, it is evident that all the known species of *Microsania* throughout the world are irresistably attracted to smoke. Smoke from varied sources causes the flies to congregate, as the numerous observations relate to smouldering fires of vegetable debris, smouldering heath fires, forest fires, smouldering bonfires, and the dense smoke cloud from the chimney of a barbecue. Their occurrence on the tent of a camp in the woods is undoubtedly a similar response to a camp-fire.

My own observations on the vespid wasp, *Eumenes curvata* Saussure,² were made in the Southern Philippines, near Dumaguete, on Negros Island. This is a common wasp in the locality, frequently building its clay nests attached to walls covered with shingles made of the leaf sheaths of abaca or on bamboo slats on porches and in rooms open to continuous access from without. The flying wasps were frequently noticed flying in the porch and adjoining room of a cottage where we were living, in the hills above Dumaguete at an elevation of about 1500 feet.

When we were smoking on the porch it was noted on many occasions that the wasps on the way back and forth to their nests hovered in lanes of drifting cigarette smoke. This is obviously very

¹Kessel, E. M., American Smoke Flies. Wasmann Collector, vol. 7, pp. 23-30 (1947).

²This and the other identifications of Vespidae were kindly made by Dr. J. Bequaert.

attractive and quickly sensed by them, either by sight or odor from adjoining areas of clear air. Aside from certain small vespids wasps (*Ropalidia*) which nest in hollow bamboo railings, the large *Vespa tropica philippinensis* Sauss. which builds its carton nests under wide overhanging eaves, and certain itinerant scoliids in search of prey, this is the commonest wasp to be seen about houses. It is the only one which deliberately enters any zones of smoke that may be drifting about, as such fumes cause the others to dart quickly away when encountered during flight.

There can be no doubt that the *Eumenes* wasps, like the small *Microsania* flies are attracted by some material in smoke, quite possibly the creosote emanating from incompletely aërated fires.

Fig. 1. *Eumenes curvata* Sauss. on nest; specimen now in the collection of the Museum of Comparative Zoology.