

Research Reports: 1955

**Recorded Calls of the Eastern Crow as Possible Attractants  
and Repellents**

Hubert Frings and Mable Frings  
Pennsylvania State University

Continuing our studies on the use of recorded sounds of biological significance for controlling the movements of pest species, we recorded the calls of crows in the wild and later broadcast the recordings to study the reactions of the birds to the calls. By this means, two calls of interest were discovered: an Assembly Call, given when crows sight a cat or owl, and an Alarm Call, given by individuals to warn others. The first of these proved highly attractive to crows, the second repellent. Tests were made at many places in Maine and Pennsylvania, and these seem to have promise for attracting crows for destruction or for repelling them from areas where they are not desired.

**Reactions to Sounds by the Wood Nymph Butterfly,  
*Cercyonis pegala***

Hubert Frings and Mable Frings  
Pennsylvania State University

Adult wood nymph butterflies, *Cercyonis pegala*, react to "pure" tones of known frequencies generated by an audio-oscillator by moving the antennae, dropping the erected fore-wings behind the hind wings, or raising the abdomen. Using these reactions as indices of reception, intensity thresholds for frequencies from 400 - 20,000 c.p.s. were determined. In general, the intensity needed to elicit the reactions was high -- 95 - 115 db. Frequency did not seem to be a major determining factor over the range tested, provided the intensity was high enough. Operations were performed on the animals - - removal of antennae, legs, wings, head, abdomen -- in attempts to localize the receptors. Isolated heads responded with antennal and proboscis movements. Headless fragments without legs and with 1/2 - 2/3 of the wings removed, mounted on wax blocks by the ventral sides of the thorax responded like normals. Even isolated thoraces, without legs and with large portions of the wings removed, reacted to sounds. No visible reactions to any stimuli could be elicited from isolated abdomens. It seems likely that the receptors are the tactile hairs widely distributed over the bodies, but an organ described by Vogel at the bases of the wings may also be active.