

**Mobbing of a Chuck-will's-widow by small passerines.**—At about 0930 hours on 19 April 1965, at Shad Landing State Park, Worcester County, Maryland, we flushed a Chuck-will's-widow (*Caprimulgus carolinensis*) from the ground. It flew and perched about eight feet up in a holly (*Ilex* sp.) at the edge of a road. The subsequent mobbing was observed from about 15 feet and was recorded on a Uher 4000s portable tape recorder.

The response was initiated by Tufted Titmice (*Parus bicolor*), Carolina Chickadees (*P. carolinensis*), and Blue-gray Gnatcatchers (*Poliophtila caerulea*) which were nearby. Almost immediately after the caprimulgid alighted, these birds began giving alarm and mobbing calls and approached by short flights from branch to branch. Soon the trees in the area were filled with small birds, which approached the caprimulgid to distances varying from a few inches to 30 feet. Table 1 indicates the numbers and kinds of birds vocalizing in the mobbing. Included among the wood warblers were one or more Black-and-white Warblers (*Mniotilta varia*), Ovenbirds (*Seiurus aurocapillus*), Pine Warblers (*Dendroica pinus*), and Yellow-throated Warblers (*D. dominica*). A Downy Woodpecker (*Dendrocopos pubescens*) also approached but was silent. Rufous-sided Towhees (*Pipilo erythrophthalmus*) called in the distance but never came closer than 50 feet. There were many interactions, including chases among the mobbing birds, but no singing. In general, both sexes mobbed. The response then began to wane. Chickadees, titmice, and gnatcatchers, the first to mob, were the first to cease calling. The birds gradually moved off. The entire mobbing lasted 12 minutes, reaching a peak between 2 and 7 minutes from the first recorded mobbing call (Table 1). The maximum rate of calling per minute per individual is indicated, for each species or group of species in Table 1.

The posture of the Chuck-will's-widow remained unchanged throughout. It perched with its bill and body at a 45° angle to the limb. The bird's eyes were partially opened during the mobbing. The Chuck-will's-widow is on occasion, perhaps often, a predator of small passerines (A. C. Bent, *U. S. Natl. Mus., Bull.* 176: 152–153, 1940). However, the birds may have confused it with an owl, i.e., this bird had a high "owl valence" (P. Hartley, *Soc. Exper. Biol. Symposium*, 4: 313–337, 1950). Its size and shape, large head, short neck, and coloration are "owl-like." Hartley found that the greater the number of such attributes present, the more readily a model was mobbed.

The fact that the birds which came in from adjacent territories probably had a strong tendency to return and resume their previous activities (e.g., singing) may account for the short duration of the mobbing (see R. Hinde, *Proc. Roy. Soc. London*, Ser. B, 142: 306–331, 1954).

The rapid rise of response to a high maximum was probably induced by the mobbing calls of titmice, chickadees, and gnatcatchers; the mobbing call of the titmouse is often imitated by field observers and has a very strong attractive effect on other species. Moreover, as more and more warblers began vocalizing, they probably stimulated others to do so. It is doubtful that the towhees saw the caprimulgid; they were at least 50 feet away and separated from it by heavy foliage. Their response must have been induced by the vocalizations of the other mobbers—the towhees rapidly increased their response very soon after the maximum response of the warblers (Table 1).

When the Chuck-will's-widow was frightened by our approach, it flew in an incomplete circle and came to rest on the ground about 80 feet away. No mobbing occurred. We again flushed it and the bird landed on the ground more than 200

TABLE 1  
NUMBER OF MOBBING CALLS PER MINUTE

Bird	N	Minutes from beginning of mobbing											Maximum calls/bird/ min	
		1	2	3	4	5	6	7	8	9	10	11		12
Gnatcatchers	2	21	24	21	15	17	5	0	0	0	0	0	0	12
Titmice	5-6	34	95	71	41	37	3	0	0	15	1	0	0	16-19
Chickadees	5	21	15	4	0	0	1	0	0	0	0	0	0	4
Warblers	10	0	20	123	123	155	109	87	5	2	0	0	0	15
Towhees	3	0	0	0	5	11	65	70	43	33	25	9	6	23

feet from the original mobbing site. Titmice and chickadees were perched nearby and gave a few mobbing notes over about eight minutes. The short duration and low intensity of this mobbing may have been a result of the bird's horizontal position on the ground. We flushed the bird two more times and each time it flew over 75 feet, landed on the ground, and was not mobbed.

We then observed activities at the original mobbing site. Nine warblers of four species were continuously singing; all were 50 feet or more from the holly. It is doubtful that they avoided the mobbing site.

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**Bilateral gynandris in an Evening Grosbeak.**—Sexual mosaics or gynanders are individuals which possess a mixture of male and female characteristics. A mosaic may be bilateral; that is, tissue typical of one sex may exist on one side of the mid-line of the individual, and that of the other sex on the other. Since Cabanis (1874) reported a flicker (*Colaptes "mexicanus"*) and a Bullfinch (*Pyrrhula pyrrhula*) with bisexual plumage there have been at least 20 cases of gynandris reported in birds. Lillie (1931) noted only 10 cases and regarded such abnormalities as rare. Benoit (1950) cited 12 cases, 10 of which had been reported previously by Lillie (8 Bullfinches, 1 Chaffinch [*Fringilla coelebs*] and 1 Ring-necked Pheasant [*Phasianus colchicus*]); the remaining 2 were a barred Plymouth Rock domestic fowl (*Gallus domesticus*) and a Gouldian Finch (*Poephila gouldiae*). Heinroth and Heinroth (1958: 69) kept a bisexual Bullfinch in captivity. Other cases of gynandris have been reported in the Orchard Oriole (*Icterus spurius*) by Townsend (1882), and in the Siskin (*Carduelis spinus*) and Green Honeycreeper (*Chlorophanes spiza*) by Harrison (1964).

In reporting on a 10-year study, Shaub (1960) listed 29 aberrantly plumaged Evening Grosbeaks (*Hesperiphona vespertina*) observed in the eastern United States and Canada; of these perhaps 4 were bilateral gynanders. One was observed on 25 November 1955 and during the following week in or near Pittsfield, Massachusetts (Shaub, 1960). The plumage of this bird's left side was that of a female and the right side that of a male except that the entire upper tail coverts were male. A second bird with male plumage on the left and female plumage on the right was banded (A. Duvall, pers. comm.; Shaub, 1960) by Mrs. Donald Radke on 13 January 1959 at East Chatham, New York, and a similarly plumaged bird was observed at Adams, Massachusetts, on 10 May 1959. Other bilateral gynanders were seen in York County, Maine, during the winters of 1958-59 (Shaub, 1960), 1960-61,