

## PEER-EDITED

## NOTES

COOPERATIVE DEFENSE OF A NEST SITE BY SWAINSON'S HAWKS  
(*BUTEO SWAINSONI*)

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*California Department of Fish and Wildlife, 1234 East Shaw Avenue, Fresno, California 93710, tim.kroeker@wildlife.ca.gov***Abstract.**—Here I report on an incident in which a large group of Swainson's Hawks (*Buteo swainsoni*) collectively drove a Golden Eagle (*Aquila chrysaetos*) away from a nest site.**Key Words.**—California; predation; raptors

On 12 July 2017 at 1320 h, in Madera County, California, I observed a large group of Swainson's Hawks (*Buteo swainsoni*) act together to drive a Golden Eagle (*Aquila chrysaetos*) away from a nest site. I observed the incident during a follow up visit to a Swainson's Hawk nesting site I had detected earlier and used 8×42 binoculars to assist my observations. When I arrived at my observation point about 300 m south of the nest tree, two Swainson's Hawks were engaged in harassing a Golden Eagle. The two hawks repeatedly stooped over the eagle. After about 10 min, the birds moved out of sight to the east. A few minutes later the birds appeared north of the nest and then moved out of sight. I drove 2 km toward the north and again observed the birds. From the new location I observed three Swainson's Hawks harassing the eagle. After a few seconds, I realized a kettle of 14 Swainson's Hawks had formed over the eagle. Periodically an additional hawk would descend from the kettle and harass the eagle. By 1350, the eagle had flown out of sight, but several Swainson's Hawks stayed within 1 km of the nest tree. These birds engaged in an aerial display, including short stoops and slower controlled descents for several minutes before dispersing.

Mobbing is a well-known defensive tactic among closely nesting birds. Arroyo et al. (2001) reported mobbing by a colonial nesting raptor, the Montagu's Harrier (*Circus pygargus*), in which up to eight harriers from nearby nests were recruited to assist in mobbing. Up to 50 Marsh Harriers (*Circus aeruginosus*) participated in mobbing near a colonial roost (Sternalski and Bretagnolle 2010). The literature provides records of fewer Swainson's Hawks cooperating in nest defense. Fitzner (1980) recorded two incidents of a non-breeding Swainson's Hawk sharing nesting territories and even assisting in nest defense with the paired birds. Cash (1989) suggests polygamous behavior may have been involved in a similar case that he observed. Thurow and White (1983) documented cases in which Swainson's Hawks nested near Ferruginous Hawks (*Buteo regalis*) and the associating pairs acted cooperatively in defense

of each other's nests against both terrestrial intruders and Golden Eagles. The incident I observed was likely a form of mobbing, with loosely associated Swainson's Hawks from nearby territories participating. As far as I could determine, no one has previously documented a large group of Swainson's Hawks acting together to defend a nest site.

## LITERATURE CITED

- Arroyo, B., F. Mougeot, and V. Bretagnolle. 2001. Colonial breeding and nest defence in Montagu's harrier (*Circus pygargus*). *Behavioral Ecology and Sociobiology* 50:109–115.
- Cash, K.J. 1989. Three adult Swainson's Hawks tending a nest. *Condor* 91:727–728.
- Fitzner, R.E. 1980. Behavioral ecology of the Swainson's Hawk (*Buteo swainsoni*) in Washington. PNL-2754 UC-11, Battelle Memorial Institute, Pacific Northwest Laboratory, Richland, Washington. 65 p.
- Sternalski, A., and V. Bretagnolle. 2010. Experimental evidence of specialized phenotypic roles in a mobbing raptor. *Behavioral Ecology and Sociobiology* 64:1351–1361.
- Thurow, T.L., and C.M. White. 1983. Nest site relationship between the Ferruginous Hawk and Swainson's Hawk. *Journal of Field Ornithology* 5:401–406.



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