

#### HAWKWATCH - CLOCKWATCH

During autumn migration, Accipiter hawks are most frequently seen during early morning, Buteo in mid-morning, and Falco in mid-afternoon. These conclusions were reached by Helmut C. Mueller and Daniel D. Berger from data gathered during four years from the western shore of Lake Michigan (The Auk, 90, 3, July, 1973). In all, 198 days of observation yielded 11,264 individuals, of which about a thousand were of other genera (Harriers, Eagles, and Vultures).

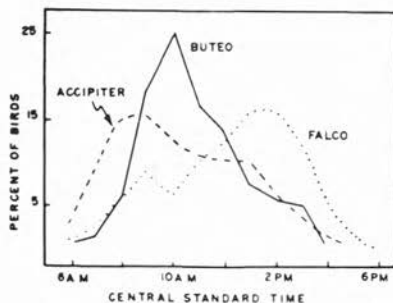
The Broad-winged Hawks were not included in this study because they occur in large flocks, and the sample available was strongly biased. Yet, the temporal pattern of this species is likely to be similar to the other buteos. The Marsh Hawk shows a peak in the early morning, while the Osprey migrates uniformly throughout the day.

The functional or adaptive significance of these diurnal variations is unclear, particularly with regard to the migrants' utilization of thermal updrafts. Are these conclusions by Mueller and Berger true of hawk migration in general or is the temporal pattern determined by local terrain or other factors? A simple count of genera by any birder could provide some interesting evidence.

L. J. R.

During an average autumn hawk migration, sightings of these three genera may show the daily rhythms indicated here. "Percent of Birds" refers to the total for each genus.

Adapted from Auk, July, 1973.



#### TOOL-USING BY BLUE JAYS

It is widely held that one manifestation of intelligence is the ability to improvise and use tools. In recent years scientists have discovered that animals other than man have this ability, and now our Northern Blue Jay has been added to this group, according to a report by Thony B. Jones and Alan C. Kamil in Science for June 8, 1973.

A laboratory-raised jay at the University of Massachusetts was observed to tear off strips of newspaper from the floor of its cage and use them to retrieve food pellets that were just beyond reach on a ledge outside of the cage. This behavior was self-acquired and not the result of training. Various other objects given to the jay were also used successfully.

The tool-using behavior increased significantly when the jay was subjected to food deprivation, showing it to be a real food-gathering response. There was also some enhancement of tool-use after the jay had been under 24-hour food deprivation, when the food pellets were not even present. Of nine hand-raised birds in the colony, six definitely exhibited tool-use, while two showed some ability. It appears that the function acquired by one individual had been learned or imitated by the other birds.

P.M.