Rough-legged Hawk: Rough-legs are one of our latest migrants – we have only observed them prior to October twice, and they peak the first week in November, just as Red-tails. However, they are only seen in 25% of the hours. They prefer strong west-northwest winds, but they show no preference for clear skies or fronts. They build throughout the day, with a peak of activity at 3 p.m., and reaching 60% of peak by 11 a.m. *Photo by Kanae Hirabayashi.*

Golden Eagle: Golden Eagles could never be considered likely – we have recorded a total of 18 in five years. The earliest we have ever record-ed one is October 6. The best chance for seeing one, though, comes the last week of October and first week of November, when they are spotted in only 2% of hours. Perhaps as a result of this scarcity, the only vari-able that they show a significant response to is wind – again, we see them primarily on strong west to northwest winds. They are most likely to be seen between 3 p.m. and 5 p.m., with very little activity earlier or later. *Photo by Christopher L. Wood*

American Kestrel: Kestrels have been recorded at our site almost every week, with the third week of November the only exception. This is not surprising, since they both breed and winter in the area. They do show a moderate peak, though, during the last two weeks in September, recorded in 14% of

hours of observation. They seem to prefer westerly winds on warm days. They show a daily peak at 4 p.m., reaching 60% of peak activity at 1 p.m. *Photo by Mary Kay Rubey.*

Merlin: Merlins are our late-flying falcons, peaking the first two weeks in October, recorded in 43% of hours. They have, however, been recorded in every week except the last of November. They prefer west-northwest winds, just after a cold front. Even during the day, they are a late migrant, reaching 60% of peak activity at 3 p.m., and peaking at 5 p.m. *Photo by Travis A. Mahan.*

Peregrine Falcon: Peregrines have been seen almost every week of the season, with only the sec-ond week in November as an exception. They peak the last week in September, though, when recorded in 34% of hours of observation. Although we have seen falcon flights on odd winds, they do show a definite preference for westerly and south-westerly winds, warm days, and cloudy days. They peak at 4 p.m., and only reach 50% of peak activity by 3 p.m. *Photo by Jerry Kumery.*

It should be noted that these preferences are just that – they are not hard and fast rules. Although following these recommendations should maximize your chances of catching a large flight, sometimes the birds behave in unpredictable ways – for example, one of our better hours of Sharp-shinned Hawks came on light south winds, and our two largest flights of Red-tailed Hawks occurred on overcast days.

Why do we do this?

The main purpose behind a hawkwatch such as this is to moni-tor trends in raptor populations. However, complicating factors such as weather, observer availability and dedication, and simple natural vari-ability can obscure trends, or even simulate them. Therefore, in an attempt to further explore the impli-cations of our data, we will examine four species in more detail. Figure 2 illustrates the yearly totals for Osprey, Sharp-shinned Hawk, Mer-lin, and Peregrine Falcon, as well as trend lines for each species. Trend

lines were calculated by Excel, and chosen by best-fit criterion (highest $R2$ value). Polynomial lines were limited to 2nd order, since we only have five data points. It should be noted that none of these trends (or, indeed, any of our trends to this point) are significant as shown.

These four graphs all suggest a steady increase in numbers for the first four years, followed by a decline in 2004. However, the first two years of the hawkwatch were notable for their lack of coverage. For the most part, observers were only present when the weather was perceived to be favorable – primari-ly northwest winds after a cold

front. As a result, we had less than half the hours of observation in 2000 that we did in 2004 (Figure 3). This increase is the one significant trend we have seen to this point (ANOVA, F=47.5, n=5, p=0.0062).

An obvious solution to this problem would be to examine the number of each species per hour of observation. Figure 4 represents the birds/hour for our four example species. (In keeping with most sites, these are actually passage rates, or birds/100 hours.)

Except for Merlin, we seem to see a decline in each species – and even Merlin show a definite drop in 2004. If we limit our analysis to this