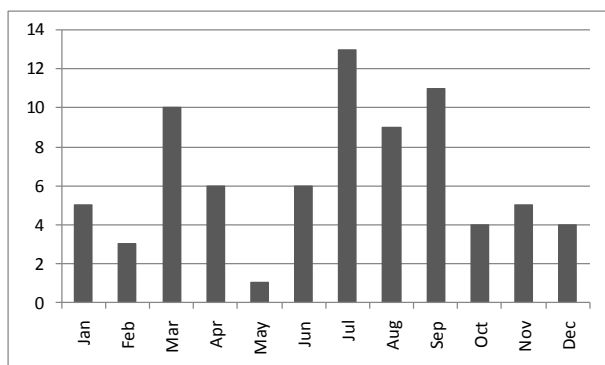


## Grey Goshawks – seasonal abundance

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The Grey Goshawk *Accipiter novaehollandiae*, although not a common species in the Hunter Region, appears to be seen more often at particular times of the year (**Plate 1**). In order to verify this impression the Hunter Region Annual Bird Reports (Stuart 1994-1998) were examined for records of Grey Goshawk. Annual reports for 1993-1995 contain all reported sightings submitted to the Hunter Bird Observers Club (HBOC). Stuart (pers. comm.) supplied all records of sightings that were not included in reports for the years 1996 and 1997. Sightings were then collated for each month over the period 1993 to 1997 and a chart constructed (**Figure 1**). Later annual reports from 1998 onwards contained only sightings of two or more birds, therefore, the data was not included in the chart. However, a similar trend to that discussed below was evident in the data.



**Figure 1.** Total number of Grey Goshawk observations in the Hunter Region for each month for the period 1993-1997. As this chart represents a frequency of sightings each observation of one or more birds is counted as one observation.

**Figure 1** shows that Grey Goshawks were recorded in the Hunter Region more often during late winter and early spring, peaking in July (43% of the records were from July to September). There is an additional a peak in March. The Chi square test confirms that the data is clumped as opposed to randomly distributed and the conclusion that the reporting rate in the July to September period is anomalously high is therefore supported at the >95% confidence level. In addition, a Hunter

Region garden bird survey, covering the period September 1992 to June 1993, tends to confirm the pattern of observations discussed above (McLauchlan 1994). Although the winter months of July and August were not included, it is evident that the number of garden observations of Grey Goshawks increased sharply into autumn and early winter.

How can this be the situation for a bird that is regarded as a year-round sedentary resident? Marchant and Higgins (1993) state that Grey Goshawks are apparently resident throughout their range, but that non-established individuals and immature birds are dispersive. The March peak in observations may show, not only that there are more birds post-breeding, but that in "...autumn and winter, [there] is dispersal outside the breeding range..." (Marchant & Higgins 1993, p.125) thereby increasing their visibility.

"Dispersal also may occur within the breeding range during [the] non-breeding season, leading to local winter-spring influxes..." towards coastal areas of Queensland and New South Wales (Marchant & Higgins 1993, p. 125, Longmore 1978, Debus 1982). This may explain the July to September peak in observations. In addition, dispersing birds often move into more open habitats than those occupied by established sedentary pairs such as more densely wooded and forested coastal and near-coastal areas. Thus dispersive birds would be more visible to casual observers leading to increased observation rates. At this time of the year, before egg-laying commences, aerial courting displays (Marchant & Higgins 1993, p. 127) may also enhance the visibility of potential breeding pairs.

Conversely, lower reporting rates are evident for the late spring-summer period and, especially so, for May (**Figure 1**). Baker-Gabb and Steele (1999) also noted the apparent absence of Grey Goshawks in coastal areas during the summer breeding season (egg-laying, September to December). They suggested that it simply reflects an absence of the

more visible dispersing birds and the difficulty in observing the more secretive breeding birds. In addition, many of the dispersing birds, by then, may also have settled into their less visible breeding mode.

The May minimum is a little harder to explain. However, the March, post-breeding dispersal of goshawks away from the coastal breeding areas, where most observations are recorded, could afterwards lead to a paucity of recorded observations in that area during May as shown in **Figure 1**.

While it is obvious why some bird species are more often seen at particular times of the year (e.g. migratory species), it is more challenging to determine whether other species are more or less visible or are, in fact, present or absent. Collating our own HBOC records in the Hunter Region Annual Bird Report allows us to answer some of these questions.

## ACKNOWLEDGEMENTS

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**Plate 1.** Grey Goshawk carrying prey, probably a lizard, Lockhart River. (Photo: Dan Herbert)