Peregrine PIT tag study in southern Scotland and northern England

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The peregrine has been widely studied and there is a great deal of information available on its ecology and behaviour. Most studies have concentrated on the breeding density and breeding success, or on behaviour and migration. There have been limited studies into adult mortality, mainly using recoveries from national ringing schemes. The main exception to this in Britain is the study carried out by Mearns & Newton (1984) where adults were trapped annually at nest sites to directly ascertain turnover and mortality among known breeders, during a period of population growth.

In 2002 we initiated a long-term study to learn more about peregrine mortality, recruitment and turnover, in which we capture and ring breeding falcons and also ring nestlings in a classic mark-recapture effort. Since 2003 we have used PIT (passive integrated transponder) tags in conjunction with numbered rings. Each transponder has a unique alphanumeric code, and can be "read" automatically by a battery-powered reader and antenna placed in the nest. The transponder has no moving parts and requires no battery, so theoretically should last forever. The PIT tags allow us to recapture falcons electronically when they visit the nest to incubate, brood or feed chicks.

This study is carried out in conjunction with collaborators from other raptor study area groups who are invaluable in locating sites, assisting in fieldwork, fitting PIT tags to chicks etc. and without this assistance the quality of the study would be reduced.

A few interim results:

- Male mean dispersal 48.4 km range: 0-209km. (n=8)

- Female mean dispersal 79.9km range: 11-104 km (n=12)

- 2006 was the first year we recorded birds, ringed as nestlings during this study, entering the breeding population (2 females aged 3 & 4 yrs)

- 210 recaptures of 161 individuals

- 20 previously ringed as chicks outside this project

- Mean age of known-age males = 8.8 yrs +/- 4.2 (n=8)

- Mean age of known-age females = 10.4 yrs +/- 2.3 (n12)

- Survival of juveniles = 0.600

- Survival of sub-adults = 0.811

- Survival of adults = 0.810