Breeding Ring Ouzel Turdus torquatus in Glen Esk Tayside, 1992.1994;- a first report

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Introduction

The Ring Ouzel is a summer migrant and a locally common breeding species in the Glens. However, little work appears to have been done on its breeding biology in Tayside.

My initial project only involved the survey of suitable 'Ouzel' habitat centred Invermark Estate, Glen Esk as this combined my hobbies of bird watching and hillwalking. As a trainee ringer with the Tay Ringing Group I decided to develop the project on this mountain blackbird to include ringing. The project now has three years data from 1992 to 1994.

The original aim was to record the distribution of the territories of breeding pairs within the study area along with any relevant information on the associated montane habitat and this was expanded in the second year to the location of nests and the colour-ringing nestlings. I have also attempted to net and ring adults in the study area.

Study Area

Glen Esk lies just north of the Highland Boundary Fault in northeast Angus. The study area encompasses Invermark, and includes Glen Effock, Glen Lee and Glen Mark. The landscape shows much evidence of being heavily and the corries and glen sides are covered in many places with rock debris, scree slopes, rock outcrops, crags and cliffs.

Heather *Calluna vulgaris* is the dominant plant species of the field layer along with grass mixtures, mainly *Festuca spp*., accounting the majority of the remainder. In the richer soils there are large patches of bracken Pteridium aquilium.

Down the slopes of this glaciated landscape run many small tributaries of the North Esk while on the bottom of the glen there is mainly rough sheep pasture with heather and areas of marsh with sedges bordering the burns Small areas of Birch *Betula spp*. and Blaeberry *Vaccinium myrtilus*, along with other plant species, are to be found on the inaccessible crags and ledges. Finally there are several small coniferous woodland plantations in the glen, a habitat that appears to be used as cover by Red Deer *Cervus elaphus* in winter.

Methods

Preliminary visits showed that the species preferred breeding on the sloping glen sides. Therefore, the survey method, which is similar to that used by Poxton (1987), involved traversing the glen sides on routes, and at an altitude, which allowed the optimum coverage of the study area. The most suitable altitude for the transect line was around the 400m contour line. A portable micro-cassette recorder was used to play 30 seconds of a singing male Ring Ouzel recording, approximately every 150 metres along the transect route. Using sufficient volume, a response from territorial males was usually obtained which consisted either of, attracting the bird towards the taped calls or illiciting the male to sing in response. This allowed the location of the bird to be recorded on an OS Pathfinder 1:25000 scale map. Considering the terrain, the use of taped calls was an important factor in locating territorial males, especially in the early part of the breeding

season. For each visit the start time for a survey was reasonably consistent but the rate of progress on a transect could be variable due to changes in bird activity with season. Suitable routes were established on most of the slopes and were used annually.

For each contact a comprehensive set of information was recorded on a data sheet. This included date, time, grid ref, altitude, aspect, gradient, meteorological data, habitat description, activity and/or sex of the bird and any disturbance.

The establishing of territories by males took place within days of arrival on the breeding grounds and as such, the period late-March through to early May appeared to be the best time for assessing the number of territory holding males. Around the middle of May the first broods fledged making censuring more difficult.

Preliminary Results and Discussion

The study area appears to hold groups of breeding Ring Ouzel in scattered locations throughout these glens. There was a pattern emerging, from territorial male sightings, which suggests that territories were established in an altitude band between 300m and 550m. This is in agreement with the findings of an analysis of B.T.O. Nest Record Cards by Flegg and Glue (1975). Territory size was difficult to determine on this type of terrain but may be measured in several hectares and therefore is possibly greater than that estimated by Durman (1977) from a study in the Pentland Hills.

While feeding areas were generally located on territories, adults also travelled distances to favoured communal feeding where little or no aggressive behaviour was noted amongst the individuals.

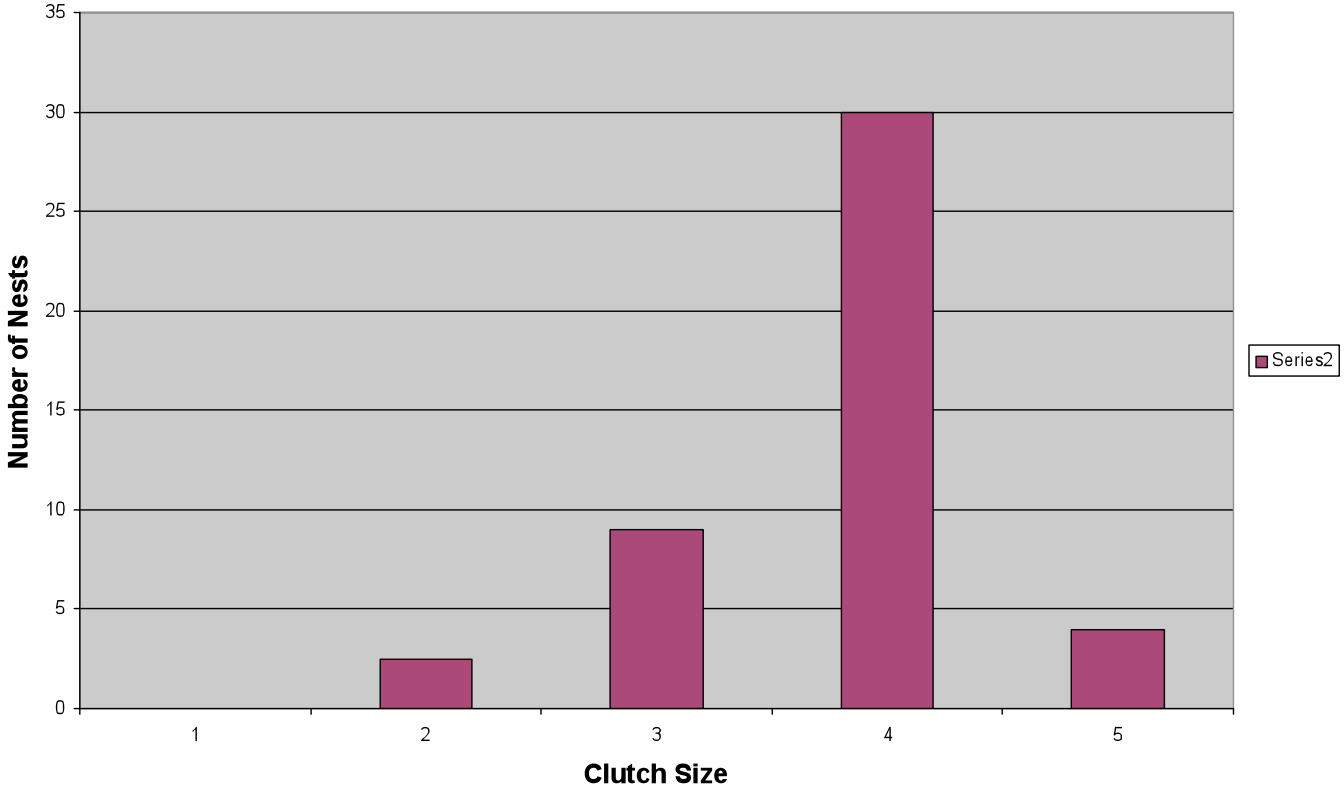
The location of nests was an important aspect of my project and over the last three years a total of 44 nest record cards has been submitted to the B.T.O. Nest Record Card Scheme. A summary of this data is given in Table 1. All nests found were at altitudes of between 320m and 530m A.S.L. and the overall mean clutch size from all nests found was 3.7 eggs. This appears to fit the trend of decreasing clutch size with increasing altitude found by Flegg and Glue (1975). In an analysis of 51 clutches they calculated the clutch size below 250m as 4.3 eggs, between 250m and 350m it was 4.2 eggs and only 4.0 eggs above 350m. Fig 1 describes the distribution of clutch sizes recorded from my study

Table 1 A Summary of Ring Ouzel breeding performance in the Invermark area of Glen Esk (1992-1994)

Breeding Season	*No of Nests*	*Mean Clutch*	*Mean Brood*	*Estimated Fledging*
1992	10	3.8	3.3	3.1
1993	17	3.7	3.4	3.5
1994	17	3.8	3.2	2.9

In 1993 a ringing programme (including darvic colour rings) was incorporated into the study and has proved useful in several ways. It has allowed me to estimate if the number of pulli found and ringed on breeding sites correspond with territories located by surveys. Also, information on post fledging predation has resulted from the retrieval of colour rings and metal B.T.O. rings from the eyries of Peregrine Falcons *Falco peregrinus* by members of the Tay Raptor Study Group.

Fig 1 Distribution of clutch sizes of Ring Ouzel Turdus torquatus, Glen Esk 1992 - 94



I intend to continue my study on breeding biology of this upland thrush in Glen Esk for several years to come. Hopefully this will provide some information on population densities, habitat preferences, nest requirements, adult fidelity to nest sites/territories and possibly natal fidelity to the study area. I shall also continue to gather information through the completion of Nest Record Cards and the ringing of pulli.

1. Durman, R. (1977) Ring Ouzels in Pentlands, Edinburgh Ringing Group Report. 5, 24-27.

2. Flegg, J.J.M. & Glue, D.E. (1975) The Nesting of the Ring Ouzel, Bird Study, 22, 1 - 8.

3. Poxton, 1. (1986) Breeding Ring Ouzels in the Pentland Hills, Scottish Birds, 14,44 - 48.

4. Poxton, 1. (1987) Breeding Status of the Ring Ouzel in South East Scotland 1985 - 86Scottish Birds, 14,205-208.