

Observations on Loch of the Lowes Ospreys 1992

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Introduction

The Loch of the Lowes is a Wildlife Trust wildlife reserve, situated near Dunkeld, Perthshire (Grid reference NO 0544). Ospreys *Pandion haliaetus* have been present at Loch of the Lowes since 1969 and successfully bred in more than 50% of years up to 1992. This report is mainly a result of observations made by myself with additional notes from other ranger staff and volunteers. It is by no means complete, sufficient data gathered however to provide useful information on the breeding behaviour and biology of the pair of Ospreys successfully breeding at this site in 1992 using the same nest as the previous year. The eyrie was artificially constructed in Winter 1990 on top of a tall Scots Pine tree to the water's edge and is situated north slightly east of the hide affording excellent views of the nesting birds from a distance of about 200 metres.

Breeding Activity And Behaviour

Arrival

The male Osprey arrived on 1 April, female on 7 April. The most obvious distinguishing feature was the female's upper breast, the male's breast appearing white. The female was marginally larger.

Mating

Copulation was first observed on 8 April the female readily accepting the male, briefly. Mating was noted daily until 28 April, two days after the first egg was laid, becoming more frequent and prolonged from 17 April onwards being most prolific, from 25 to 27 April. On at least one occasion mating occurred after a sprig was delivered to the eyrie. Copulation was always observed on or close to the nest.

Eyrie Building

On 12 April the male started bringing sprigs to the nest, a daily occurrence until 25th the day the first egg was laid. On 14 April the female started rebuilding the eyrie, a daily occurrence up to egg laying. The male observed rebuilding the eyrie on 21 April with the female looking on. On the following day both birds were seen building the nest together. The female seemed to use her body to shape the bowl of the nest by sitting down, turning and resettling. On 23, 24 and 25 April grasses and mosses were brought in. On the latter day female frequently tried settling into the bowl.

Egg Laying

On 26 April the first egg was laid. This was apparent by the female's low lying position in the nest and her rocking motion when resettling after changing position.

Incubation Period

The female always incubated the eggs during the hours of darkness. After dawn the male would relieve the female and take over during incubation. Recordings of male brooding bouts were made over the first 8 days of period in which it was noted that the male relieved female for periods ranging from 50 minutes to 1 hour and 50 minutes between 0435 hours and 0703 hours.

Although continuous recording of Osprey behaviour was not carried out throughout the day, it was clear the female spent much the greater time brooding. The birds left the nest only for short periods of time and only did so when exchanging brooding roles or chasing off intruder birds. However, on 9 May the birds left the eyrie for the longest recorded interval throughout the incubation period, while the eggs were being security marked. The exercise took 30 minutes, the same period the female was off the nest. The male was a good provider of Fish during the incubation period. After feeding himself, the remainder of the fish were taken to the eyrie. He would take over incubation while the female went to roost away from the tree to feed. Nest tidying was observed regularly whilst brooding, usually by the female and occasionally by the male.

The male spent much of his time during the incubation period roosting in one of the several dead Scots Pine trees around the 431; eyrie. Indications that hatching was nearing were first observed 5 days before the first egg was hatched. The following recordings were made during this period: 27 May, the female Osprey behaving differently, walking around the 491; eggs and looking down; 28 May, female Osprey feeding on tree 29 May, male brought fresh sprigs into the eyrie; 30 May, grass brought to the eyrie for lining, birds very careful when moving around the nest; 31 May, birds settling very carefully and looking into the nest a lot.

Hatching to Fledging

On 1 June the first egg hatched. Fish were brought to the nest where the female fed herself and appeared to feed the chick. The following day it was clear that she was feeding a chick or chicks, although at this stage the nestlings were not visible due to the depth of the nest cup. She would now continue to feed on the eyrie and brood the nestlings herself until fledging, the male supplying the fish.

On 6 June while both birds were on the nest, it was observed that the male was ripping off pieces of fish, with the female appearing take pieces from his beak to feed to the chicks.

On 9 and 10 June the first visible signs of movement in the nest by chicks were observed, on 11 June confirmation was made that two chicks had hatched.

On 15 June the male was not observed between 1630 and 2100 hours. This was 1 hour and 55 minutes longer than any previous periods of absence observed since the eggs were hatched. During his absence the female appeared distressed. She became even more distressed when 5 intruding Ospreys were sighted although they were not directly over the eyrie-She left the nest for 35 minutes in an attempt to chase them 305; left:41; off. On 16 June the male was also absent from the nest site for a lengthy period of 4.25 hours, the female again appearing agitated, her head erect and looking in all directions. On the following day however the male did not disappear for any length of time.

Little recording was carried out over the remaining nestling and fledgling period. However, observed changes in behaviour were recorded as follows: on 22 June the male was observed feeding the chicks; on 27 June the female started to leave the chicks uncovered, an on going daily observation; on 4 July one of the chicks started to exercise its wings; on 6 July both chicks were exercising their wings.

Ringling the chicks was carried out on 6 July. The exercise disturbed the adults in that they both flew around the eyrie giving distress calls. Adding to their alarm, at least one intruding Osprey appeared over the nest. The exercise was completed in about 35 minutes, the female resettling on the nest 20 minutes later. The however, was not observed until 1700 hours the following day when he arrived with a Fish. Prior to his appearance that day, the female was heard calling frantically from the eyrie and was observed flying over to a Scots Pine opposite the hide and attempting to fish, unsuccessfully. The following day the male returned to its regular fishing pattern but his roosting sites tended, from then on, to be further away from the eyrie.

On 14 July the young were observed flapping their wings as if attempting to fly. On 16 July, during the heavy rain, the female moved to the branch beside the eyrie, she made no attempt to protect the chicks with her wings as previously observed during rainfall. Up to fledging the female spent increasing amounts of time on roost, the chicks exercising their wings on the eyrie.

On 21 July one of the chicks went through the motions of hovering while anchored to the nest by its talons. The same behaviour was witnessed the following day, this time in both juvenile birds, one of which raised itself about a foot off the nest momentarily. On 23 July several sightings were made of both birds themselves above the nest.

Fledging to Departure

At 1750 hours on 24 July, 53 days after hatching, one of the juveniles took its maiden flight escorted by the parent birds, one on each side. The following day the second juvenile flew for the first time after a rather reluctant start. Calls from its mother, perched on another roost, appeared, however, to encourage it to fly from the eyrie. The newly fledged birds often made several attempts at landing before being successful.

On 26 July, while on the eyrie, the young birds were observed for the first time feeding themselves with a fish brought in by the male.

On 28,29 and 30 July the young Ospreys made spectacular aerial manoeuvres, mock diving and occasionally attempting to snatch a leaf or twig from a tree. During this period the young birds became much more proficient at landing and started to roost on the dead Scots Pine instead of the eyrie tree. On 1 August both juveniles observed for the first time attempting to fish on the Loch of the Lowes without success.

It was recorded on 7 August that both juveniles were back on the eyrie calling out, and that the adult female responded by calling back, possibly an attempt to make them fish by themselves. The male was recorded bringing in fish up to 15 August although recorded observations had become less frequent fledging. The last recorded sighting of the male was on 16 August. On 17 August a juvenile was attempting to fish close to the hide, trying twice and failing both times. Over the next few one of the juveniles was observed calling constantly for

food, the female always responded by bringing in a fish, although sometimes after being away for lengthy periods. On 20 the female left the area accompanied by one of the juveniles. While they were away, the other fledgling was observed mock diving before returning to the eyrie and calling constantly. After a lengthy period the female returned, this time with a live fish which she deposited on eyrie before flying off immediately. She appeared awkward with the moving fish, with one talon holding on to the eyrie, grasping the fish, and its wings flapping when the fish moved. After a short period however, started to feed.

On 21 August one of the juveniles appeared to come back with a fish, the mock diving in front of the hide. The three birds were seen less frequently from then on but were recorded daily until 31 August.

On 1, 2 and 3 September only one juvenile and the female were recorded. On 4 September only 1 Juvenile remained and was recorded at 0730 hours eating a large fish on the eyrie. It was observed briefly again on 5, 6 and 7 September, the last recorded sightings.

Factors Affecting Breeding

Weather

Overall the weather favoured the Ospreys. In the important stages of incubation and well into the nestling period it was warm, dry and sunny. The weather deteriorated over the season from late June onwards becoming colder, overcast with periodic bouts of heavy rain.

Feeding

Only occasionally did the Ospreys fish on Loch of the Lowes itself. Loch Butterstone (with a fish farm), Loch of Craiglush, the hill lochs to the north and the River Tay were in easy range for the birds to fish, as were a number of other small lochs and ponds. The Osprey's diet included brown trout, rainbow trout and pike, the only species observed to be eaten even though the Loch of the Lowes contains perch and eels as well as pike.

Non-resident and Intruding Ospreys

Non-resident Ospreys were regularly observed throughout the nesting season. As many as 5 were observed on at least one occasion and sightings of 4 birds occurred several times. Three Ospreys were observed regularly in the area much of the season. One Osprey in particular showed great interest in the eyrie, flying over and occasionally landing on it before being chased off by the resident birds.

On 20 May a large female landed on the edge of the eyrie beside the brooding female. The male took up roost on the branch next to the nest, both resident birds calling frantically. The resident female moved to the edge of the nest for several minutes before resettling firmly on the eggs. The intruder tried to force herself into the base of the nest but the female held her ground. During the invasion the male landed on the intruder's back four times, sinking his talons into her back and rocking back and forth removing feathers. On the fourth attempt the intruder appeared to move slightly towards the edge of the eyrie where the male made aerial dives at her. The female moved to the opposite side of the eyrie from the intruder. They faced each other for a brief period before the resident female appeared to strike out at the intruder with her beak. Both birds then simultaneously launched into a full attack, the stronger intruder forcing the female back to the nest edge over which they both fell, talons locked. The birds

were half way or more down the tree before releasing their hold and taking to flight The whole incident lasted 55 minutes.

An intruding female was observed attempting to land on the eyrie on several occasions after this, but was quickly chased off by the resident pair.

Disturbance

It was crucial during the Ospreys settling in period that visitors to the Loch of the Lowes kept noise levels and movement to a minimum. Even after the birds had become established, any obvious movement or loud noise from the hide, or around it, caused the birds to fly off the eyrie or roost giving their alarm call.

Acknowledgements

Thanks are due to the many volunteers who helped guard the eyrie, particularly during the incubation period.