

Purple Sandpipers breeding in Scotland

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Purple Sandpipers *Calidris maritima* were first recorded breeding in Scotland in 1978. Brief details of that event and subsequent breeding at the same locality have appeared in the annual Scottish Bird Reports and in the reports of the Rare Breeding Birds Panel (*Brit. Birds* 73: 18; 75: 168; 76: 15). In the interests of the birds, fuller details were suppressed. This paper now draws together observations for the six years 1978-83, including reports submitted to the Scottish Bird Report and the Rare Breeding Birds Panel. It appears under my name in an attempt to continue to safeguard the Purple Sandpipers' attempt to colonise Scotland. For this reason, individual observers' names and the locality are not disclosed. Due to possible adverse effects, including inadvertently helping avian and mammal predators to locate nests, local ornithologists decided not to search for nests and eggs, but to rely on seeing young to prove breeding. I am grateful to all of the observers who sent in records; I should welcome unpublished observations which add to the following account.

The Purple Sandpiper is a common visitor to the rocky shores of Scotland. The first adults arrive in July and the last usually emigrate in mid to late May, although occasional ones may oversummer on the coasts. In view of the colonisation of Scotland in recent years by other Scandinavian species, such as Wood Sandpiper *Tringa glareola*, Temminck's Stint *Calidris temminckii* and Lapland Bunting *Calcarius lapponicus*, it is likely that the Purple Sandpipers also originated from Scandinavia, rather than from the Faeroe Islands, where the species is reported as declining (*Brit. Birds* 72: 277, 591). The habitat was arctic-alpine heath similar to the tundra slopes and plateaux used by nesting Purple Sandpipers in Scandinavia. The short vegetation was dominated by sedges, mosses and lichens, interspersed with rocks, scree and gravel.

History of colonisation of Scotland, 1978-83

The first observation was on 3rd June 1978, when a pair of Purple Sandpipers was found in suitable nesting habitat. It was a fine, sunny day, and one bird occasionally displayed by raising and flapping its wings while calling to the other bird. The birds were very tame and walked within 1.5 m of the observer as they fed on insects from the ground. He told me that

evening of his find; we decided to keep the matter confidential, and to return later to see if they had bred. Surprisingly, this was the first record of this species in suitable nesting habitat in Scotland, despite the fact that it was a likely colonist from Scandinavia. It was also the only species to nest in the Faeroe Islands and not in Britain and Ireland.

On 20th June 1978, one adult was seen in the same general area, and on 26th the other adult (with more yellow at the base of the bill) was observed. On 8th July 1978, an adult performed a rodent-run display in the same area, and then returned to brood three newly hatched chicks. One adult was seen with at least one chick on 23rd July, while a second adult was found 750m away. On 29th July one chick was just able to fly. Thus, in the first year, one pair hatched three young and at least one young fledged. Subsequent observations have revealed the difficulty of locating all chicks of a brood, especially as they get older.

In 1979, the first adult was seen on 24th May (in the following paragraphs only significant dates and sightings are given). On 19th June, a nest containing three eggs was found and the following day the observers recorded a change-over of adults at the nest. On 4th July, two chicks about two or three days old were seen with a parent; one of these chicks was nearly flying on 25th July. On this date, another adult was found 500m away with at least one chick, about seven days old; these birds were relocated on 9th August, along with a second chick, but no Purple Sandpipers were found at the first location. One of the later brood was just able to fly on 10th August.

In 1980, an adult was giving distraction display on 16th July in the same general area, and a chick was seen on 21st and 24th July. On 19th July, however, an adult was observed about 1 km away, near the 1979 nest site, with a chick just able to fly. The last sighting was of an adult on 2nd August and a juvenile by itself some distance away.

The first pair in 1981 was seen displaying on 18th May and rodent-running distraction display was noted from 21st June. On 28th June, three separate adults were found, each with two young (about ten days old, five to seven days old and about five days old), while, in a fourth area, two adults and a nest containing three eggs were reported. Fledging success for the three broods was not obtained. The nest contained one newly hatched chick and two addled eggs on 19th July.

In 1982, an agitated pair was present on 1st June; presumably, there was a nest nearby containing eggs. In the same general area, a pair was observed displaying on 23rd June, while on 2nd July an adult was looking after at least one two- or three-day-old chick. The last record was of an adult and juvenile on 21st July.

Other observations at Scottish nesting grounds

The earliest recorded dates have been 13th May 1983 (one), 18th May 1981 (a pair) and 24th May 1979 (one), but these refer to chance sightings rather than careful searching for spring arrivals. Display has been noted between 18th May and 23rd June: principally one bird raising and fluttering wings on the ground and calling to the other bird, although on 26th May 1981 a singing bird was heard calling in song-flight over the nesting grounds. These observations follow the pattern recorded in *BWP*. Two clutches o.

three eggs have been reported by visitors (they hatched on about 2nd July 1979 and 19th July 1981). The eggs and nests were normal for Purple Sandpiper, and both sexes have been recorded incubating at the start of incubation. Extrapolation of egg-laying dates based on 21-22 days (*BWP*) gave the earliest full clutch as 29th May, with four clutches completed during 1st-7th June, one clutch during 8th-14th June, two clutches during 15th-21st June and two clutches in the last week of June. *BWP* states that the fledging period is not recorded; we have two records relating to fledging, one for 21 days and one for 23 days. The young are tended by one adult, which seems to leave very soon after the young fledge. The juveniles appear to depart within two weeks of fledging. We have no evidence of flocking prior to departure.

Discussion

We have found some difficulty in finding enough pairs of birds for the number of subsequent broods. For example, in 1981, when three broods and a clutch of eggs were recorded on 28th June, the maximum number of adults located was five. Although it is difficult to find Purple Sandpipers, we wonder if polygamy has occurred. Broods have been as close as 500m apart, and, in the year of greatest density, the four broods were in an area of about 250ha. Injury-feigning adults have led people up to 300m before flying off and returning at low level to the original area. The latest record (adult and young) was on 10th August 1979. The only records in suitable nesting habitat away from this locality are of remains found in two Peregrine *Falco peregrinus* eyries (K. Brockie *in litt.*).

The conservation needs for this species were examined, but it was decided that, as suitable nesting habitat for this species is plentiful in Scotland, the success of the attempted colonisation was most dependent on climatic conditions. Nevertheless, undue attention from egg-collectors or unnecessary disturbance from birdwatchers may adversely influence breeding success; for this reason, we appeal for confidentiality and for the nesting birds not to be disturbed unnecessarily. The species is now on Schedule 1 of the Wildlife and Countryside Act 1981, and it is hoped that Purple Sandpipers become established as regular breeders in the United Kingdom.

Summary

Purple Sandpipers *Calidris maritima* were found nesting for the first time in Scotland in 1978 and bred for five consecutive years at the same locality. The best year was 1981, when four broods were located. The colonisation follows the trend of other Fenno-Scandinavian species beginning to breed in Scotland. The following table summarises annual breeding success:

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| 1978 | One brood, three young hatched, at least one fledged |
| 1979 | Two broods; at least one of each fledged |
| 1980 | Two broods; at least one of each fledged |
| 1981 | Four broods (at least two young in each of three broods, only one in fourth) |
| 1982 | One brood fledged one chick; possibly one other attempt |
| 1983 | At least one adult present, but breeding not proved |

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