Nesting of the American Water Pipit *Anthus spinoletta rubescens* (Tunstall) at Godhavn, West Greenland

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(Med et dansk resumé: Amerikansk Skærpiber Anthus spinoletta rubescens *fundet ynglende ved Godhavn, Vestgrønland)*

Publications from the Danish Arctic Station on Disko Island no. 73

During July 1977, whilst carrying out botanical work in the vicinity of Godhavn, I found a nest of the American Water Pipit *Anthus spinoletta rubescens* with six eggs. It was observed daily by myself and Dr. J. Böcher until we left the area. This note is an account of the sequence of events at the nest and of the parent birds' behaviour.

The nest

The nest was discovered on 29 June, in a small gulley running NW - SE, at an altitude of 70 m. The nest was in a crevice in the rock, about 120 cm from the ground, on the SW-facing vertical face of the gulley. Though it was close to the front of the crevice, it was overhung by branches of *Cassiope tetragona* and mosses. The mosses were loose and became detached during the following weeks, presumably as a result of the birds brushing past as they visited the nest. The rock face became very warm during the afternoons as the sun shone on it for several hours a day.

The nest was well concealed and was only revealed by the departure of the sitting bird, as I approached within 1 m. It was constructed of twigs and grass stems and lined with grasses.

When found the nest contained a full clutch of six eggs, which were so completely covered with mid- and dark-brown blotches that the pale background was almost all hidden. On 8 July, i.e. 9 days after discovery, three eggs hatched, and by the following morning the remainder had hatched. This gives a minimum incubation period of ten days, well within the twelve days mentioned by Sutton & Parmelee (1954) for southern Baffin Island.

The young birds (Fig. 1) were last observed on 22 July and at this time were about to fledge. The fledging period of this species on Baffin Island was between 12 and 14 days (Sutton & Parmelee *op. cit.*) and in the NW United States it was 13 days (Pickwell 1947), so as the young at Godhavn were 13-14 days old they were about average for the species in fledging time.

Behaviour

When first flushed from the nest, the parent behaved in a very agitated manner. At first it fluttered along the ground dragging a wing in a typical injury feigning display. It then flew to a nearby rock, calling all the while, and it remained there flicking its tail and repeatedly calling a series of quick sharp notes. It remained there until I was out of sight. It never repeated the broken wing display, and on subsequent occasions it flew from the nest, always as I was within touching distance and went straight to the rock, where it called rapidly (Fig. 2).

Parent birds were seen occasionally feeding among dwarf shrub vegetation. No observations were made on feeding young or frequency of visits.

The male's display flight was very prolonged. The bird was first seen on 28 June, flying across the broad valley (Lyngmarken) just north of Godhavn. It rose rapidly on the western side, uttering a series of short notes, and then flew slowly across the valley in a gradual descent uttering a sequence of slightly descending notes at longer intervals, finally dropping behind the cliffs on the eastern side, in the direction of the nest. It was seen on seve-

Fig. 1. Nest with young about to fledge. Photo J. Böcher.
Reden med de næsten flyvefærdige unger.

ral days displaying in the same way, at rather long intervals. During a flight it flew at least 500 m and the whole flight lasted more than a minute on occasion. The frequency of these flights decreased during the next two weeks, until after the young had hatched, when it was heard only once or twice. The only other occasion when display flight was heard was when the young were a week old, both parents were near the nest and both acted in a very agitated manner. The male made short flights with brief snatches of flight song.

DISCUSSION

Though there have been scattered records of this species in West Greenland during the breeding season, most have been of birds on migration (Salomonsen 1950, 1967). There are very few verified records of breeding, though young birds are recorded from autumn migrations. According to Salomonsen (1950) only one clutch of eggs has been found, by Holbøll, in the first half of the nineteenth century, and a skin collected by him in 1826 at Godhavn (where he found the clutch) was probably a breeding bird. The other probable breeding records are based on the presence of fledged young.

The inconspicuousness of the nest and the size of the territory make it difficult to find; nevertheless the scarcity of breeding records is probably a true indication of infrequent breeding, when one considers the number of ornithologists who have worked in the area and that for instance at Godhavn there has been a biological station for 70 years. The reasons for this scarcity are worth examining.

During the summer of 1977, from the end of June onwards, the weather was exceptionally good with almost uninterrupted clear skies and sunshine. The previous summer was very cold and wet and during a seven-week stay in the area, no individual of this species was seen

or heard. For a species so near to the northern edge of its range it is likely that breeding takes place only in favourable summers. On Baffin Island (Sutton & Parmelee 1954) there was a wet summer in 1953, and the Water Pipit was the only species of land bird to suffer heavy losses. Out of 57 young observed at fourteen nests, 3 were seen to fledge, 12 may have, 12 may or may not, 11 were destroyed by predators and 21 died in the nest when well developed, from exposure or starvation. Half the nests were 100% unsuccessful. These data suggest that the species is near its limit even further south.

Most of the Baffin nests were hidden under *Cassiope* clumps, almost all were south facing. The nests recorded for Labrador are also mostly on S or SW slopes (Todd 1967) and on Bylot Island at 73°N the species is restricted to sunsoaked ravines on south facing bluffs (Drury 1961). This restriction to southerly facing slopes is similar to that of many plants at the northern edge of their range. Clearly in good years the Pipit is able to successfully fledge young in the most favourable habitats at these northerly latitudes, where the temperature remains high and when food is abundant. In bad years not only may nesting success be low, but adults may also suffer; Sutton & Parmelee refer to reports of destruction of adults on a large scale by a June snowstorm. Visitors to West Greenland in good summers should be aware that the Water Pipit may be nesting so that further records of this scarce breeder can be obtained.

ACKNOWLEDGEMENTS

My thanks are due to Dr Jens Böcher who took the photographs. My visit to Greenland was financed by the NATO Ecoscience project.

DANSK RESUMÉ

Amerikansk Skærpiber *Anthus spinoletta rubescens* **fundet ynglende ved Godhavn, Vestgrønland**

Artiklen omtaler det første grønlandske ynglefund af Amerikansk Skærpiber i 150 år. Der har dog flere gange i den mellemliggende periode været stærke indicier på ynglen, f.eks. iagttagelser af ungfugle. Ynglelokaliteten samt forældrefuglenes adfærd beskrives indgående. Formen er på disse breddegrader ved nordgrænsen af sin udbredelse og kan sandsynligvis kun gennemføre ynglecyklus i gunstige somre, som det netop var tilfældet i 1977. Der refereres til forholdene i Canada.

Fig. 2. Adult calling near nest. Photo J. Böcher.
En af forældrefuglene nær reden.

REFERENCES

Drury, W. H. Jr. 1961: Studies of the breeding biology of Horned Lark, Water Pipit, Lapland Longspur and Snow Bunting on Bylot Island, Northwest territories, Canada. Bird Banding 32, 1-46.

Pickwell, G. 1947: The American Pipit in its Arctic-Alpine Home. Auk 64, 1-14.

Salomonsen, F. 1950: Grønlands Fugle. Ejnar Munksgaard, Copenhagen.

Salomonsen, F. 1967: Fuglene på Grønland. Rhodos, Copenhagen.

Sutton, G. M. & Parmelee, D. F. 1954: Survival problems of the Water Pipit on Baffin Island. Arctic 7, 81-92.

Todd, W. E. C. 1967: Birds of the Labrador Peninsula. University of Toronto Press.

MS received 1st December 1977.

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