

# *Orkney Field Club*

*Founded in 1959*

*Aim: To encourage the study and conservation of the natural and cultural heritage of the County*



The audience attending the RSPB Local Group and Orkney Field Club spring meeting on 17<sup>th</sup> April almost filled the hall of the St Magnus Centre, Kirkwall, to hear the audio/visual presentation by Professor Peter Slater on “The How and Why of Bird Song”. The speaker, one of the country’s leading authorities and researchers on the subject, spent many of his formative years in Orkney and undertook much of his initial work here, studying in particular the Chaffinch populations of the woodland at Binscarth and Balfour Castle. Peter Slater went on to become Professor of Animal Behaviour at Aberdeen University.

Bird song has always captured the human imagination and has been celebrated in poetry and music, as in the works of Shelley and Vaughan Williams. When the study of birds became more serious, ornithologists used bird song to differentiate between visually similar species, thus Gilbert White was able to separate the Willow Warbler from the Chiffchaff and Wood Warbler.

Why do birds sing? They obviously need to communicate to attract mates, to warn off rivals and to warn of danger. They could do so acoustically, visually or chemically, eg by pheromones. In a vegetated environment or over any distance the most effective means is acoustically, ie by song or call. Furthermore experiments have shown that singing involves little expenditure of energy.

How do they sing? Birds have a unique organ called the syrinx which is the equivalent of the human voice box. The syrinx contains membranes which vibrate and generate sound when air from the lungs is passed over them. The air from the each lung is fed to the syrinx which thus has two separate sources and means of sound production. With specially adapted brain nuclei birds are able to generate incredibly complex songs and calls, the more complex the vocalisation the more developed the nuclei.

Birds adopt many different song strategies for attracting mates and warning off rivals. They may sing several similar phrases and then switch to a different phrase. They may have few or even hundreds of standard phrases. They may repeat phrases in the same order or vary the sequence infinitely. The male Sedge Warbler has a huge variety of song elements and mixes these up randomly and it is the size of the male’s repertoire which appeals to the female, whereas in the Song Sparrow, an American species, it is the male’s ability to articulate the standard elements accurately that the female finds attractive.

Space does not allow further elaboration of Peter Slater’s fascinating and stimulating talk. Suffice it to say that we were privileged to hear an accomplished speaker who had an encyclopaedic knowledge of his subject. Very many thanks to Professor Slater for a most entertaining evening.