Evidence of re-nesting after brood loss in Red Grouse
*Lagopus lagopus scoticus*

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The Red Grouse *Lagopus lagopus scoticus* is a single-brooded species that can re-lay if a clutch is lost during the nesting period (Cramp & Simmons 1980). However, there is no reported evidence regarding second clutches being attempted after a brood of young chicks is lost. Indeed, there is only one record of re-nesting after brood loss in Galliformes and this refers to the Ring-necked Pheasant *Phasianus colchicus* (Dumke & Pils 1979). In that study four ‘wild’ Pheasant hens in Wisconsin were recorded as having re-nested after brood loss. However, doubts about the short time intervals between suspected re-laying, incubation and hatching noted for at least two of the birds suggest that nest appropriation played some part in the result (Dumke & Pils 1979).

During the summer of 2003, we monitored a number of radiotagged hen Red Grouse on a heather *Calluna vulgaris* moor managed for Red Grouse in the Scottish central highlands. Without disturbing the hen, we used radiotelemetry on alternate days through May to monitor whether the hen was incubating and thus determine hatch date. After hatch, we located hens by radiotelemetry and used trained pointing dogs to find chicks on days 5, 10 and 15 after hatching.

Thirty-three hens successfully hatched chicks from their first nesting attempt. Of these, 15 lost their entire brood in the first 15 days after hatching. However, we found that two of these hens (A and B) produced a second brood after the loss, for unknown reasons, of their first brood between days 5 and 10. The presence of a second brood was established on the 50th day after each first clutch had hatched, as hens were located at this time to determine survival rates. Hens A and B were found to have chicks judged, from the juvenile primaries, to be under 12 days of age (Parr 1975). In comparison with other chicks of known ages, they were estimated to be 7–10 days of age for the four chicks with Hen A and 10–12 days for the five chicks with Hen B. We estimate that Hen A would have re-laid between 4 and 9 days after brood loss and Hen B between 3 and 8 days after brood loss. These second broods would have hatched in mid-June 2–3 weeks after the main hatching period.

Hence Red Grouse can, if rarely, re-lay and produce second broods after losing the first. Although we cannot exclude nest appropriation, we think that the time between brood loss and re-laying, along with the well-documented parental abilities of Red Grouse, support our conclusion.

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REFERENCES


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