ORNITOLOGIA NEOTROPICAL 2: 95–96, 1991

NOTES ON REPRODUCTION OF THE SOUTHERN LAPWING IN COLOMBIA

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Key words: Southern Lapwing, Vanellus chilensis, *reproduction, egg characteristics, incubation, Colombia.*

Despite its wide distribution throughout most of South America, the Southern Lapwing (*Vanellus chilensis*) remains poorly studied, and even the most basic aspects of its natural history have been only briefly reported. According to Johnsgard (1981) four subspecies are recognized, of which only *cayennensis* occurs at the extreme northern border of the species range. With the exception of brief descriptions of nests and eggs (e.g., Dalgleish 1881, Euler 1900, Ihering 1900, Chubb 1910), a few notes on timing (see Hilty & Brown 1986), and evidence of cooperative breeding under conditions of habitat saturation (Walters 1980), little published information on reproduction of this geographical form is available.

On 3 March 1981, I found a nest of the Southern Lapwing in a meadow 7 km W of the town of Cartago, Depto. del Valle, Colombia (4°45'N, 75°55'W). The nest was a shallow depression in the ground about 160 mm in diameter, surrounded by grass roots, with no lining other than some dry grass. The nest contained two eggs that I measured and weighed to the nearest 0.1 mm and 0.2 g using a dial caliper and a pesola scale. The form and color of the eggs matched those described by Johnson (1965) for the southern races *chilensis* and *fretensis*, and de la Peña (1981, 1987) for *lampronotus*. However, they were smaller (especially in breadth) than those noted by Johnson (1965), but similar to those of *lampronotus* as reported by Smyth (1927) and de la Peña (1981, 1987). I marked both eggs distinctively, and visited the nest again the following morning at about 1100. On 5 March at 0800, I found and marked a third egg similar in size to the other two. The departure in size from published information for the southern subspecies *chilensis* and *fretensis* is consistent, since measurements of eggs from other localities such as those reported by Dalgleish (1881), Ihering (1900), Chubb (1910), and Schönwetter (1962) and those of another clutch from the Cauca Valley (H. Alvarez, pers. comm., Table 1) yielded similar results.

I visited the nest daily and noted the presence of an incubating adult on every occasion. On 6 April, one of the eggs found on 3 March and the one laid on 5 March hatched, and the remaining egg on the following day. Total incubation time for the egg laid on 5 March was 27 days, which aggrees with the estimates of Haedo-Rossi (1969) and Ruschi (1979), and the 26-day period of artificial incubation recorded by Greer & Greer (1967). Assuming that laying intervals are similar to those reported for the closely related Eurasian Lapwing (*Vanellus vanellus*) (30–48 h, Johnsgard 1981), total incubation time for the whole clutch was about 30 days.

The dorsal down of newly hatched chicks was cryptic in color and pattern, and both their body mass and dimensions were relatively uniform (Body mass: 18 ± 1 g, Culmen: 10.3 ± 0.3 mm, Wing-chord: 13.2 ± 1.8 mm, Tarsus: 26.8 ± 2.7 mm).

Behavior of the incubating birds changed during the observation period. From the discovery of the nest to 17 March (ca. 12 days of incubation), the incubating bird abandoned it upon my approach without performing any agonistic displays. After this date both adults participated

in the mobbing flight common to this species (Myers 1979). Both days prior to hatching, the adults increased the intensity and duration of their mobbing, even landing within 5 m of the nest in spite of my presence. On those occasions, the birds fluffed their plumage, bent their heads and necks towards the observer, and kept their bills open, behavior that closely resembles the threat display described for the species by Gallegos-Luque (1984). These behavioral changes during the incubation period might be a response of the adults to the peeping behavior of lapwing chicks noted by Greer & Greer (1967) four days before hatching.

A final point that deserves comment is the length of the breeding season of the northern race in Western Colombia. While Ridgely & Gaulin (1980) report nesting during January and February near the southern end of the central Andes, the two nestings reported here occurred in different months and climatic conditions. Furthermore, a nest observed in Cali on 8 April 1988 (H. Alvarez, pers. communication) and another in the central Andes (22 April 1989, pers. obs.) suggest a breeding season encompassing at least half the year.

ACKNOWLEDGEMENTS

I am indebted to both M. Alberico and K.-L. Schuchmann for encouraging me to publish these observations long hidden in my note book and for reviewing early drafts of this manuscript. I also want to thank H. Alvarez for permitting me to include his unpublished notes on nests and eggs of the Southern Lapwing in Colombia, and L. Kiff and J. W. Beltrán for their criticisms and help with the literature search.

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Accepted 3 April 1991.