

These authors pointed out that Ridgway (1901) had also expressed reservations about the inclusion of some species currently classified in *Saltator*. There is only partial concordance, however, between the species that Ridgway (1901) and Hellack and Schnell (1977) considered incompatible within the genus. *Saltator* is the largest genus within the subfamily, and its very size and diversity may make it a tempting target for dismemberment.

Conceivably, one could segregate *S. cinctus* in a genus separate from both *Pitylus* and *Saltator* on the basis of the unique color pattern of the plumage and its deep bill. This is clearly an extreme view and one we do not necessarily advocate; we only wish to emphasize that, in our view, *S. cinctus* has no obvious close relative. The relationships of all species within the *Pitylus-Saltator* assemblage await further investigation.

We are most grateful to John S. McIlhenny, H. Irving Schweppe, Laura R. Schweppe, and Babette M. Odom for their support of the field work of the LSUMZ. Antonio Brack E., Marc Dourojeanni R., Susana Moller H., and Carlos Ponce P. of the Dirección General Forestal y de Fauna of the Ministerio de Agricultura, Lima, Peru continue their support of the LSU field studies and issued the necessary permits for it. Comparative studies of Peruvian birds at the American Museum in 1975 were made possible by a grant to O'Neill from the Frank M. Chapman Memorial Fund.

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Received 10 November 1978, accepted 26 March 1979.

### Is Displacement a Sign of Female Dominance or Only a Response to Close Following by Males Trying to Avoid Being Cuckolded?

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Frequent observation of females supplanting or displacing males from perches has led some ornithologists (e.g. Hinde 1955-56, Thompson 1960) to conclude that female passerines in species with high male parental care "dominate" their mates during breeding. Hinde explained female dominance as due to sexual differences in the schedule of seasonal changes in the relative strengths of what he hypothesized are opposing tendencies in birds toward aggression and sexual behavior. His explanation implicitly views behavior as merely a passive manifestation of physiological condition rather than as a means by which birds actively play the formal genetic game we call evolution.

By contrast, Brown (1975: 85) views dominance in functional evolutionary terms, arguing that "dominance" is more than just the result of successful aggression, that it is a social condition made adaptive by providing the successfully aggressive animal with access to some critical resource. Following Brown's reasoning, I believe it is inappropriate to conclude that females dominate males during the breeding season unless it can be shown that females thereby deprive males of valuable resources (such as food) for which they both compete. I have found no evidence of such deprivation in nine field seasons of study of Mountain Bluebirds (*Sialia currucoides*). Instead, I have discerned a pattern of male-female association that suggests that males' attempts to avoid being cuckolded inadvertently lead to females' aggressiveness. Cuckoldry can make a genetic slave (or altruist) of a male by compelling him to promote the spread of

a competitor's genes as though they were his own. Because of its powerful genetic results, behaviors preventing cuckoldry can be expected to evolve in tandem with male parental care.

Male Mountain Bluebirds provide about as much parental care as females, and they almost always follow their foraging mates during the time when cuckoldry is possible. Following behavior is an effective anti-cuckoldry tactic, because it provides males with the opportunity to attack other males that might attempt to inseminate their mates; it also results in females fairly frequently displacing males from perches. Female displacement of following males thus may not be an indication of female dominance so much as an indication of aggressive arousal of females by males following them too closely. Males tend not to be aggressive to females in return, probably because it is better for them to irritate females as little as possible in order to be as close to them as possible: reciprocal aggressiveness probably tends to increase the distance between pair partners, though not necessarily to sunder their pair bond.

This interpretation is reinforced by the facts that:

(a) Males generally do not have to forage when their mates are feeding because males can forage while females are on their nests, a much longer time than females spend away from their nests.

(b) Males incur some costs in following their foraging females because nest predators and competitors can more easily destroy or usurp nests in this hole-nesting species when both adults are absent, and because displacement must inflict pain, injury, or fatigue. The acceptance of nontrivial costs in using a behavior that is itself superficially unnecessary implies that the behavior has evolved because it produces some important but hidden result; avoidance of cuckoldry could be such a result.

(c) The pattern of foraging alters radically after hatching. Mates then generally forage alone, alternating trips out from the nest and back in order to maximize the rate of food delivery to young (Power 1974). Of course, the risk of cuckoldry is eliminated after laying is completed, 13–14 days prior to hatching (Power 1966), but the exact termination of the period of risk may not always be easily detected because incubation at times begins before clutch completion. Thus males may be disfavored for using the onset of incubation as the proximate cue to stop guarding against cuckoldry, and there might be no other obvious cues until hatching unless male bluebirds can count as high as 5–9 (the upper limits to clutch size, Power 1974), and can determine that clutch size has not changed for several successive days. Moreover, males are not strongly favored for changing their pattern of association with females until hatching favors their feeding nestlings as rapidly as possible, assuming that the costs of association mentioned above are not excessive during the incubation period.

(d) Males not only follow females about during the period of cuckoldry risk, they largely control females' movements into and out of their nest cavities by means of signals and mate feeding (Power 1979). Such control is contrary to the subordinate status males would have to have were females dominant to them.

The urge to label phenomena is appropriately high among scientists because classification is an effective means of ordering variation and thus an important step in understanding it. Correct classification, however, requires the cautious use of labels, including the consideration of alternative labels (denoting alternative explanations) for observed events. Labeling female displacement of males as "female dominance" without first determining that females thereby gain access to some critical resource is not a cautious use of labels. Biologists should at least consider the alternative explanation of aggressive female response to following by males that are trying to avoid being cuckolded before they conclude that displacement implies dominance. Insofar as female displacement of males is only a response to following and not a tactic in a strategy of domination, it is an example of the distinction made by Williams (1966) between mere effect and genuine function.

I thank Chris Doner, Larry Wolf, and Susan Smith for useful comments on this paper, Elizabeth Litovich and Mike Lombardo for help in finding critical references, and the National Science Foundation for partly supporting my research through grants BNS76-08840 and BNS77-09299.

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Received 18 December 1978, accepted 2 April 1979.

### Status of the American Flamingo in the Dominican Republic and Eastern Haiti

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Between December 1975 and July 1976 and on 4–5 October 1977 we visited several sites of historical occurrence of the American Flamingo (*Phoenicopterus ruber*) in the Dominican Republic. Here we report on the status of the flamingo in these areas and on recent breeding records based on our observations and on those of other observers in the Dominican Republic. The locations of the records discussed below are shown in Fig. 1. Numbers following site names refer to those presented in Fig. 1.

*Lago Enriquillo* (14).—Apparently Lago Enriquillo has long been an important feeding and roosting area, as flamingos were reported there by early French and Spanish explorers (Buffon 1781). Vaughan et al. (1921) noted flamingos on the southern shore, and Abbott (*in* Wetmore and Swales 1931) saw 40–50 there daily. Bond (1934) observed a flock of about 300 flamingos from an airplane in July 1931 and heard local reports of 20–30 flamingos appearing every 3–4 days to feed at the west end of the lake. H. Peters (*in* Allen 1956) recorded 625 flamingos on the lake during a U.S. Fish and Wildlife Service waterfowl aerial survey in 1949. In an aerial survey on 13 January 1978, J. A. Ottenwalder (pers. comm.) estimated between 500 and 600 birds (mostly adults) in 3 groups at the mouth of Río las Marias, at the extreme east end of the lake.

We counted between 47 (9 December 1975) and 235 (22 June 1976) flamingos during 8 visits to Lago Enriquillo (Table 1). Between January and March 1976 we had reliable reports of 200 birds on Isla Cabritos (15) in the northwestern part of the lake but were unable to confirm these. During an aerial survey on 4 October 1977, we saw 275 flamingos on the lake, mostly around the mouth of the Río Bermesí at the eastern end of the lake.

Allen (1956: 65) listed Lago Enriquillo as a possible flamingo breeding site of major importance in the past. Prévost (1746–1789) recorded flamingos breeding at the lake, and Abbott (*in* Wetmore and Swales 1931) was told by locals of nesting at Lago Enriquillo in 1919. Recent flamingo breeding has not been reported in the Dominican Republic, and it is generally thought that most of the birds in the country today come from the colonies on Inagua, Bahama Islands, immediately to the north (Allen 1956: 48). Interchange between Inagua and Hispaniola has been confirmed by band returns (Sprunt 1975).

On 7 December 1975 we observed a band of 82 full-grown flamingos resting and feeding along the south shore of the lake 5 km west of Duvergé (12). Among these birds were three downy young. Two of the chicks were approximately 2 weeks old and the third was about 7 weeks old, judging from the size and plumage descriptions given by Chapman (1905) and Palmer (1962). About 1 km farther east along the south shore another group of 30 flamingos rested close to the lake edge on a broad panne. Approximately 18 birds were on nests, and several downy chicks were among the nesting group. To avoid

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