nested in trees with conspecifics even though adjacent unoccupied trees were available. Black-crowned Night-Herons are often predators within the colony (T. Custer, pers. comm.), and it may be that the Snowy Egrets gained protection against predation by their social nesting.

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The use of tape-recorded calls to count Virginia Rails and Soras.—Tape recordings have been used for two decades in censusing breeding birds (Johnson et al., pp. 68–75 *in* Ralph and Scott, eds., Studies in Avian Biology, Vol. IV, 1981). Because of the elusive nature of rails and the dense vegetation that they inhabit, tape playing has become a principal means of counting rails. The playing of taped calls significantly increased the calling rate of breeding Virginia Rails (*Rallus limicola*) and Soras (*Porzana carolina*) (Glahn, Wilson Bull. 86:206–214, 1974). Both species responded equally well to interspecific and conspecific calls. Baird (M.S. thesis, Fort Hays State College, Fort Hays, Kansas, 1974), however, found that Soras responded less consistently to taped calls than did Virginia Rails, and concluded that broadcasts of taped calls could not be applied accurately to counting Soras. This paper (1) tests the hypothesis that breeding Virginia Rails and Soras respond equally well to tapes of interspecific and conspecific calls and (2) addresses the value of night counts in obtaining indices of breeding rail densities.

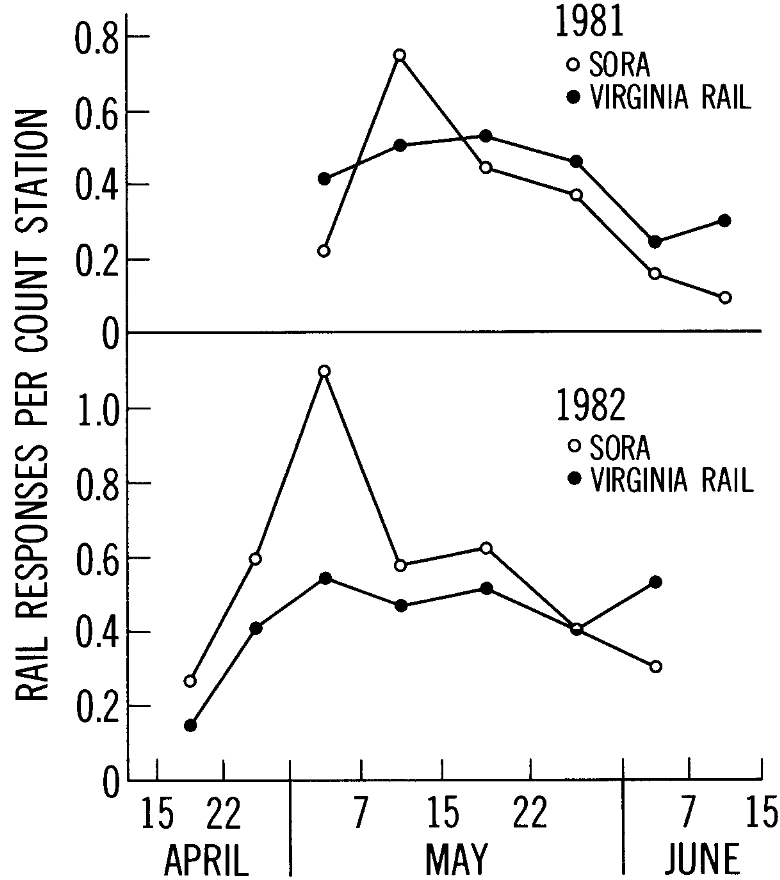

FIG. 1. Weekly response rates of Virginia Rails and Soras to playback recordings per count station during morning surveys in 1981 and 1982.

Materials and methods.—We studied the distributions of territorial Virginia Rails and Soras on Dewey's Pasture and Spring Run Game Management Areas, two state-owned wetland complexes in northwestern Iowa. Count routes were established around the periphery of marshes. Along these routes, we established 108 stations at a mean interval of 100 m (30–150 m), thus achieving complete coverage of available habitat. We surveyed 65 ha of wetland, including 52 ha of emergent vegetation. One-minute continuous-loop tapes of the primary advertising call of the Virginia Rail and Sora, each broadcasting seven calls per min, were played with a cassette recorder. Maximum sound pressure one m from the source was 90 db.

We conducted counts between 1 May and 16 June 1981 and 15 April and 1 June 1982. Counts were run at least once per week along each route and were made from 1 h before to 3 h after sunrise. They were not performed when wind velocity exceeded 24 km/h or in

TABLE 1

TAPE RECORDINGS RESPONDED TO BY BREEDING SORAS AND VIRGINIA RAILS IN 1981 AND 1982

	1981 No. responding to recordings of				1982 No. responding to recordings of			
	Sora	Virginia Rail	χ^2	*P*	Sora	Virginia Rail	χ^2	*P*
Sora								
Prelaying	49	16	16.8[a]	<0.001	130	44	42.5	<0.001
Postlaying	64	31	11.5	<0.001	92	44	16.9	<0.001
Virginia Rail								
Prelaying	37	29	1.0	>0.25	49	52	0.1	>0.75
Postlaying	77	118	8.6	<0.005	65	89	3.7	≥0.05

[a] Chi-square test for goodness-of-fit with the expectation of an equal response to recordings of Virginia Rails and Soras.

heavy rain. Night counting was initiated in early June of each year, when morning surveys stimulated few responses to taped calls, and was conducted from 1 to 4 h after sunset.

Virginia Rail and Sora calls were each broadcast continuously for 2 min at each station. The call broadcast first was alternated at each station. For all rail vocal responses, we recorded the tape played first, and the tape responded to, and noted the locations of rails on cover maps prepared from aerial photos. We were conservative in counting responding rails. Unless they were simultaneous, when two responses came from approximately the same location, only one was recorded.

Results and discussion. —The responses of 528 Virginia Rails and 470 Soras were recorded. Weekly response patterns for 1982 were similar to those in 1981, but they exhibited an earlier peak in the number of rail responses/station and an earlier decline in response frequency (Fig. 1). This temporal shift reflects differences in nesting phenology. The peak of egg laying occurred approximately 10 days earlier in 1982 (10 May) than in 1981 for both Virginia Rails and Soras.

Soras responding to morning broadcasts were significantly farther away (68 ± 4.4 m [SE], N = 470) than Virginia Rails (51 ± 2.7 m, N = 504) ($t = 2.39$, $P < 0.01$). Virginia Rails responded to night broadcasts (118 ± 7.1 m, N = 124) at a significantly greater distance than during morning counts ($t = 6.84$, $P < 0.001$). During late incubation and brood-rearing, Virginia Rails responded more readily to night broadcasts than to morning broadcasts (0.4 and 0.9 Virginia Rail responses/station, respectively N = 10, $t = 4.2$, $P < 0.001$). Neither morning nor night broadcasts of either Virginia Rail or Sora tapes elicited responses from Soras after early June.

Chi-square analysis of response data indicates that Soras responded to conspecific calls significantly more often than to Virginia Rail calls ($\chi^2 = 98.78$, $P < 0.001$) (Table 1). Virginia Rails exhibited a higher responsiveness to conspecific calls only during the postlaying period ($\chi^2 = 11.70$, $P < 0.001$) (Table 1). Prelaying Virginia Rails exhibited no preference for the calls of either species. The order of tape presentation did not effect the responses of either species.

Our data do not support the hypothesis that Virginia Rails and Soras respond equally well to conspecific and interspecific calls during the breeding season (Glahn 1974). Tacha (M.S. thesis, Fort Hays State College, Fort Hays, Kansas, 1975) found that a large percentage of Virginia Rail calls were elicited by conspecific calls (78%), while Soras responded best to interspecific broadcasts (71%); however, he had a small sample of Sora responses (N = 17). Our data indicate that where Virginia Rails and Soras are sympatric, both species may be counted successfully during the prelaying period by broadcasting recordings of the Sora's primary advertising call. During the postlaying phase of the breeding season, however, best results are achieved by alternating broadcasting calls of both species.

Night counting seems to be useful for obtaining indices to breeding rail densities. Night counts stimulated greater Virginia Rail response rates, and they responded over a greater radius then than they did during morning surveys. Further investigation is needed to assess the value of night surveys in counting rails during prelaying.

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Food robbery of wintering Ring-necked Ducks by American Coots.—Several species of waterfowl (e.g., American Wigeons [*Anas americana*] and Gadwalls [*A. strepera*]) steal food from American Coots (*Fulica americana*) (Munro 1949, Knapton and Knudsen 1978, Ryan 1981), but there are few reports of coots robbing waterfowl. Bent (1926) reported that coots rob Canvasbacks (*Aythya valisineria*) and Redheads (*A. americana*). In this paper we describe observations of coots robbing Ring-necked Ducks (*A. collaris*).

Study area and methods.—The study was conducted on Par Pond, an 1120-ha cooling reservoir for nuclear production reactors at the Savannah River Plant, South Carolina. Observations were made between 17 January and 1 April 1985, at three sites (two coves and one open lake site) approximately 3.0 km from one another.

The shallow zones (<2 m) of Kenyon Bay and Loyal's Lair, the two cove sites, were dominated by white water-lily (*Nymphaea odorata*), American lotus (*Nelumbo lutea*), and water-shield (*Brasenia schreberi*). Big-floating bladderwort (*Utricula inflata*) and lemon balm (*Bacopa caroliniana*), shallow water submergents, were also found in both coves. Abundant deep-water (>2 m) submergents included wild celery (*Vallisneria americana*) and Eurasian water milfoil (*Myriophyllum spicatum*). Loyal's Lair contained sparse stands of cattails (*Typha latifolia*) and slender spike rush (*Eleocharis acicularis*), whereas an extensive border stand of cattails and a shallow-water zone of dense spike rush were found in Kenyon Bay. The third site, Cold Dam, had a deep-water zone that was dominated by wild celery. Slender pondweed (*Potamogeton pusillus*) and snailseed pondweed (*P. diversifolius*) were present in the shallow-water zone. Lotus was the dominant floating macrophyte on the site, and cattail was present along the shoreline.

Ring-necked Ducks were selected randomly and observed with a 15–45× spotting scope for 5 min. Approximately equal numbers of males and females were observed. The sex of each Ring-necked Duck robbed was recorded.