

## SPRING AND SUMMER RECORDS OF THE YELLOW RAIL IN MAINE

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**Abstract.**—Spring and summer records of Yellow Rails (*Coturnicops noveboracensis*) are reported from Maine, USA, where during May–June 1990, calling males were located at four sites in eastern and central portions of the state. Yellow Rails occurred at sedge- and grass-dominated floodplains adjacent to free-flowing streams. Yellow Rails were associated with damp, low-lying areas (water depths in early July averaged 5–10 cm), a senescent mat of vegetation 15–20 cm above the substrate, and relatively low densities of sedge, rush, and grass stems (85–115/m<sup>2</sup>). These observations represent the only recent evidence that Yellow Rails might breed in the eastern United States; a more definitive determination of the status and distribution of this poorly known species in eastern North America is needed.

### INFORMES DE INDIVIDUOS DE *COTURNICOPS NOVEBORACENSIS* EN MAINE DURANTE LA PRIMAVERA Y EL VERANO

**Sinopsis.**—Se informan individuos de *Coturnicops noveboracensis* durante la primavera y el verano en Maine. Durante mayo–junio de 1991 se localizaron machos vocalizando en cuatro áreas de las partes este y central del estado. Las aves se encontraron en planicies inundadas, dominadas por gramíneas y junquillos adyacentes a arroyos. Los pájaros se asociaron a áreas inundadas de poca profundidad (la profundidad durante julio promedió de 5–10 cm), con esteras de vegetación de 15–20 cm sobre el sustrato y una densidad relativa baja de yerbajos, juncos y tallos de gramíneas (85–115/m<sup>2</sup>). Estas observaciones representan la única evidencia reciente de que *C. noveboracensis* pueda estar reproduciéndose en la parte este de los Estados Unidos. Es necesario determinar de forma precisa, el estado y distribución de esta especie en el este de Norte América.

The eastern extent of the Yellow Rail's (*Coturnicops noveboracensis*) breeding range in North America is poorly defined. Herein we review historical records of the Yellow Rail in eastern North America, report on 1990 spring and summer observations of the Yellow Rail in Maine and describe habitats used by Yellow Rails in Maine. Our observations

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represent the first recent evidence that Yellow Rails might breed in the eastern United States.

HISTORICAL RECORDS OF THE YELLOW RAIL IN  
EASTERN NORTH AMERICA

Although once considered restricted to middle and northern portions of North America, west of Lake Ontario and Hudson Bay and east of the Rocky Mountains (Anderson 1977), nesting-season records of Yellow Rails from the Labrador Peninsula (Todd 1963) and from Quebec suggest breeding activity occurs regularly, although quite locally, as far east as the Gaspé Peninsula (David 1983; Gosselin and David 1980, 1982; Terrill 1943; Yank and Aubrey 1984, 1985, 1986; Yank et al. 1987). Nesting-season records during 1980 in New Brunswick and Nova Scotia (Vickery 1980) provided a further extension of the eastern boundary of the species' known breeding range, and suggested that the Yellow Rail might be overlooked in intermediate areas with suitable habitat, such as northern Maine.

Although Yellow Rails may be regular fall migrants in Maine (Bent 1926, Palmer 1949), only one publication describes their occurrence in the state during the nesting season: a report of a nest and eggs near Calais, cited by Knight (1908) and later by Bent (1926), but disputed by Palmer (1949). Neither Palmer's (1949) *Maine Birds* nor his file of bird sightings compiled during the 1950s and 1960s (Fogler Library Special Collections, University of Maine, Orono) describe any other spring or summer records for the Yellow Rail in Maine, and no sightings were obtained during recent, state-wide surveys for the Maine Breeding Bird Atlas (Adamus 1988).

Elsewhere in the northeastern United States, reports of Yellow Rails during the breeding season have been disputed or poorly documented, and frequently suggest misidentification of Virginia Rail (*Rallus limicola*) vocalizations. Forbush (1927) did not consider the Yellow Rail a breeder in Massachusetts, and knew of no definite breeding records for the rest of New England. Bagg and Elliot (1937) reported "many" individuals heard in eastern Massachusetts in June 1889, "quite a number" in May–June 1930, and others sporadically in 1890, 1892, 1898 and 1901. Harris (1945) reported a pair of Yellow Rails with a brood on 1 August 1944 in Newburyport, Massachusetts, but did not describe distinguishing characteristics. Griscom (1949) reported that "a positive chorus" of Yellow Rails was heard on the Charles River Marshes in Dedham, Massachusetts, in July 1931, but later (Griscom and Snyder 1955), citing confusion over the calls of the species, stated that "all published references to the Yellow Rail as nesting or heard calling in Massachusetts should therefore be cancelled and revoked." In Connecticut, Merriam (1877) reported breeding near Middletown in 1874–1875, but was doubted by Sage et al. (1913). In Vermont, one bird was shot near Rutland on 18 July 1887 (Bagg and Elliot 1937). A Yellow Rail was recorded during pilot surveys for the Vermont Breeding Bird Atlas Project in 1976 (Laughlin and

Kibbe 1985) but not during the main portion of the survey (1977–1981). In New York, a breeding-season report of the Yellow Rail at Cayuga Lake by Kellogg (1962) was disputed by Bull (1974), and the species was not encountered during state-wide surveys for the New York Breeding Bird Atlas (Andrle and Carroll 1987). Todd (1940) stated that, in western Pennsylvania, “without a doubt this rail breeds in the swamp [Pymatuning] occasionally.” It is notable that authors of historical accounts never reported hearing the characteristic “ticking” calls of the Yellow Rail (e.g., Bagg and Elliot 1937, Brewster 1901, Kellogg 1962), despite allegedly encountering large numbers of individuals, referring rather to “kicker” calls and calls of “kik-kik-queah,” which are more reminiscent of the sympatric Virginia Rail.

#### RECENT OBSERVATIONS OF THE YELLOW RAIL IN MAINE

During May and June 1990, we located calling Yellow Rails at four sites in eastern and central Maine (Table 1). The sites were scattered widely among Penobscot, Hancock and Washington counties (Fig. 1). Four of our observations were of single, calling males, and two calling males were heard at two sites. Most identifications were aural and based on the distinctive, syncopated “ticking” call of territorial males (Walkinshaw 1939). A tape-recording was made of the Milford birds on 7 June. We were able to make a visual identification on three occasions by attracting birds with tape-recorded calls. In two instances, we flushed birds and observed their white-tipped secondary feathers.

During May, males began calling during twilight (30 min before dark), usually in short bouts of 5–10 clicks, followed by silent periods of 2–3 min. Calling became nearly continuous after twilight ceased, and continued with little interruption until dawn. Birds located in mid-June lacked a twilight calling period, however, and typically commenced calling well after dark (ca. after 2130–2200 hours), but called continuously thereafter. In late May, males were audible at up to 1 km. Following emergence in late May of mosquitos and chorusing frogs, which interfered with our hearing, males were detectable at <0.25 km, except late at night or on cool nights when mosquito and frog activity diminished. Unlike Terrill (1943) and Walkinshaw (1939), we did not notice any diurnal calling (we usually remained at wetlands 3–6 h after sunrise to survey populations of other marsh birds).

We did not attempt to confirm nesting at any of the four wetlands where Yellow Rails were present, and it is uncertain whether the birds observed were resident breeding birds, nonbreeding residents or late migrants. Although calling birds were not relocated during limited surveys from mid June to early July, birds were not necessarily absent during our later surveys. Surveys in Michigan found that breeding Yellow Rails are vocal on some nights and silent on others (Bart et al. 1984). Calling activity of resident Soras (*Porzana carolina*) and Virginia Rails diminished about mid June at wetlands throughout Maine (J. P. Gibbs and S. M. Melvin, unpubl. data). The range of dates within which we observed

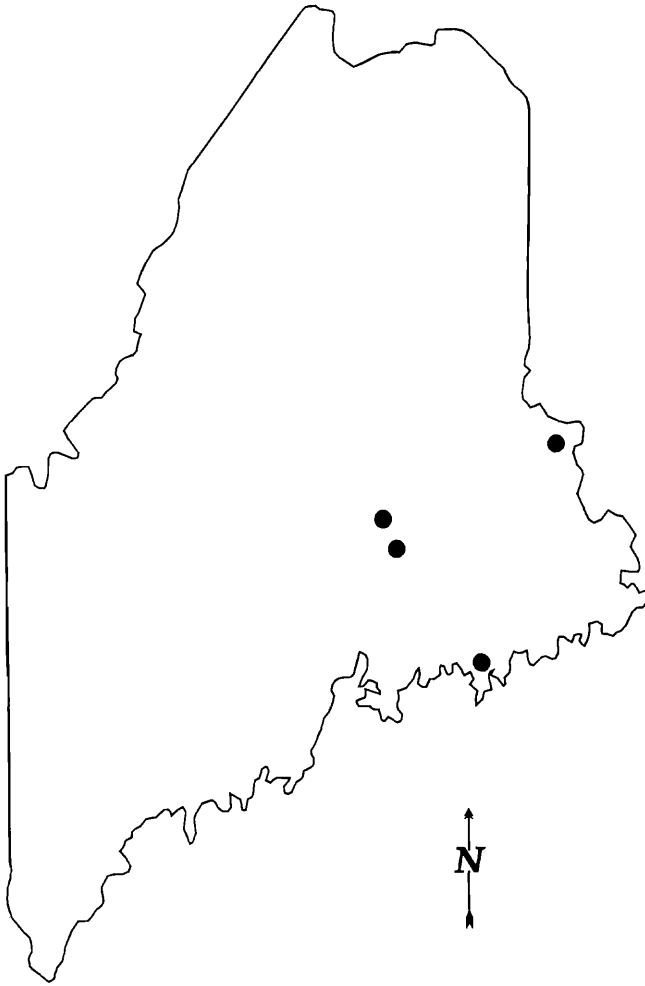


FIGURE 1. Locations of Yellow Rails in Maine during spring and summer 1990.

Yellow Rails in Maine falls within the egg-laying period of Yellow Rails in the Upper Peninsula of Michigan, which occurs at a similar latitude to central Maine. Walkinshaw (1939) and Bookhout and Stenzel (1987) recorded initiation of singing activity during the first week of May, and initiation of egg-laying during the first week of June and possibly the last week of May. Calling activity ended by mid July (Stenzel 1982).

#### HABITATS OF YELLOW RAILS IN MAINE

Three sites used by Yellow Rails in Maine (Milford, Passadumkeag and Codyville) were large (>400 ha), sedge- and grass-dominated floodplains adjacent to free-flowing, third- and fourth-order streams (Table

TABLE 1. Observations of Yellow Rails in eastern and central Maine during May and June 1990.

Site	Date	Visit	
		Time of survey	Number males calling
Gouldsboro, Hancock Co.	2-3 May	1930-0735	1
	12-13 June	1800-1910	0
	3-4 July	2047-0843	0
Codyville Plt., Washington Co.	27-28 May	1945-0805	2
	29-30 May	2045-0913	1
	1 June	1945-2145	0
	29 June	1930-2300	0
Milford, Penobscot Co.	28-29 May	1930-2200	1
	7-8 June	1845-0023	2
	15 June	1830-2330	0
Passadumkeag, Penobscot Co.	8 June	2000-2335	1
	16 June	2130-2400	0

2). The unimpounded nature of these streams results in extensive spring flooding and subsequent summer drying, which perhaps maintains the sedge- and grass-dominated plant communities favored by the Yellow Rail in Maine. The fourth site, in Gouldsboro, was smaller and occurred on a first-order, unimpounded stream dominated by a monotypic stand of the sedge *Carex lasiocarpa*.

Between 30 June and 7 July we revisited wetlands and measured vegetation height, stem density, height of the senescent vegetation mat, and water depth within 25, 0.1-m<sup>2</sup> circular plots located randomly in each of the areas where Yellow Rails had been observed (Table 2). Yellow Rails were associated with damp, low-lying areas (water depths in early July averaged 5-10 cm) in otherwise dried-out portions of floodplains. A senescent mat, 15-20 cm above the substrate and comprised of the previous year's sedge growth, also characterized sites. Yellow Rails breed elsewhere in their range among dense growths of sedges, usually *C. lasiocarpa*, with underlying mats of dead, flattened sedges and shallow water or moist soils (Bookhout and Stenzel 1987). *C. lasiocarpa* dominated the Gouldsboro site, but this "indicator" plant of Yellow Rails (Bookhout and Stenzel 1987) was not found at the other sites. Another unusual feature of Yellow Rail habitats in Maine was the relatively low densities of sedge, rush, and grass stems (85-115/m<sup>2</sup>) compared to densities measured at other areas (e.g., 672-1398/m<sup>2</sup> in Michigan, Bookhout and Stenzel 1987).

#### CONCLUSIONS

A more definitive determination of the status and distribution of the Yellow Rail in Maine and elsewhere in the Northeastern United States

TABLE 2. Physical and vegetative characteristics (mean  $\pm$  1 SD) of four wetlands used by Yellow Rails in Maine, 1990. Habitat parameters were measured between 30 June and 7 July.

Site	Area (ha)	Sedge, rush and grass stems/m <sup>2</sup>	Height tallest stem (m)	Water depth (cm)	Height of senescent mat (cm)	Predominant species
Gouldsboro	14	85.5 $\pm$ 25.5	0.9 $\pm$ 0.1	10.2 $\pm$ 2.7	21.5 $\pm$ 5.1	<i>Carex lasiocarpa</i> , <i>Carex rostrata</i>
Codyville	840	137.6 $\pm$ 44.9	0.6 $\pm$ 0.1	7.0 $\pm$ 8.3	17.0 $\pm$ 11.9	<i>Carex canescens</i> , <i>Carex haydenii</i> , <i>Carex vesicaria</i> , <i>Juncus effusus</i> , <i>Scirpus atrovinctus</i>
Milford	405	124.5 $\pm$ 83.2	1.0 $\pm$ 0.2	0.8 $\pm$ 1.8	11.3 $\pm$ 6.7	<i>Calamagrostis canadensis</i> , <i>Carex rostrata</i> , <i>Carex</i>
Site I		115.7 $\pm$ 63.4	1.1 $\pm$ 0.2	2.1 $\pm$ 6.9	16.2 $\pm$ 12.9	<i>stricta</i> , <i>Dulichium arundinaceum</i> , <i>Eleocharis</i> <i>erythropoda</i>
Site II						<i>Calamagrostis canadensis</i> , <i>Carex rostrata</i> , <i>Scirpus atrovinctus</i>
Passadumkeag	459	150.0 $\pm$ 68.2	1.0 $\pm$ 0.1	5.8 $\pm$ 3.2	19.6 $\pm$ 6.3	

is needed. We were able to survey a very small portion of seemingly suitable habitat available to Yellow Rails in Maine (over 23,000 ha of inland fresh meadows occur in the state, Maine Department of Inland Fisheries and Wildlife, unpubl. data), and surveyed only small portions (<25%) of potentially suitable habitat at sites where the species was located. Future searches of large sedge-dominated wetlands, especially in northern Maine, New Hampshire, Vermont and New York, might be productive.

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#### LITERATURE CITED

- ADAMUS, P. R. 1988. Atlas of breeding birds in Maine, 1978-1983. Maine Department Inland Fisheries and Wildlife, Augusta, Maine. 366 pp.
- ANDERSON, J. M. 1977. Yellow rail (*Coturnicops noveboracensis*). Pp. 66-70, in G. C. Sanderson, ed. Management of migratory shore and upland game birds in North America. International Association of Fish and Wildlife Agencies, Washington, D.C.
- ANDRLE, R. F., AND J. R. CARROLL (EDS.). 1987. The atlas of breeding birds in New York State. Cornell Univ. Press, Ithaca, New York. 551 pp.
- BAGG, A. C., AND S. A. ELLIOT. 1937. Birds of the Connecticut Valley in Massachusetts. The Hampshire Bookshop, Northampton, Massachusetts. 813 pp.
- BART, J., A. STEHN, J. A. HERRICK, N. A. HEASLIP, T. A. BOOKHOUT, AND J. R. STENZEL. 1984. Survey methods for breeding yellow rails. *J. Wildl. Manage.* 48:1382-1386.
- BENT, A. C. 1926. Life histories of North American marsh birds. *Bulletin U.S. National Museum*, No. 135:316-325.
- BOOKHOUT, T. A., AND J. R. STENZEL. 1987. Habitat and movements of breeding yellow rails. *Wilson Bull.* 99:441-447.
- BREWSTER, W. 1901. An ornithological mystery. *Auk* 18:321-328.
- BULL, J. 1974. Birds of New York State. Doubleday/Natural History Press, Garden City, New York. 655 pp.
- DAVID, N. 1983. Quebec Region. *Amer. Birds* 37:970-971.
- DEVITT, O. E. 1939. The Yellow Rail breeding in Ontario. *Auk* 56:238-243.
- FORBUSH, E. H. 1927. Birds of Massachusetts and other New England states. Vols. 1-3. Mass. Dept. Agric., Boston, Massachusetts.
- GOSELIN, M., AND N. DAVID. 1980. Quebec region. *Amer. Birds* 34:877-878.
- , AND ———. 1982. Quebec region. *Amer. Birds* 36:956-958.
- GRISCOM, L. 1949. The birds of Concord. Harvard Univ. Press, Cambridge, Massachusetts. 340 pp.
- , AND D. E. SNYDER. 1955. Birds of Massachusetts. Peabody Museum, Salem, Massachusetts. 205 pp.
- HARRIS, W. G. F. 1945. Yellow Rail nesting in Massachusetts. *Auk* 62:459-460.
- KELLOGG, P. P. 1962. Vocalizations of the Black Rail (*Laterallus jamaicensis*) and the Yellow Rail (*Coturnicops noveboracensis*). *Auk* 79:698-701.
- KNIGHT, O. W. 1908. The birds of Maine. C. H. Glass and Co., Bangor, Maine. 693 pp.
- LAUGHLIN, S. B., AND D. P. KIBBE. 1985. The atlas of breeding birds of Vermont. Univ. Press of New England, Hanover, New Hampshire. 456 pp.

- MERRIAM, C. H. 1877. A review of the birds of Connecticut with remarks on their habits. Trans. Conn. Acad. 150 pp.
- PALMER, R. S. 1949. Maine birds. Bull. Museum Comp. Zool., Vol. 102. Harvard College, Cambridge, Massachusetts. 656 pp.
- SAGE, J. H., L. B. BISHOP, AND W. P. BLISS. 1913. The birds of Connecticut. Case, Lockwood, and Brainard. Hartford, Connecticut. 370 pp.
- STENZEL, J. R. 1982. Ecology of breeding yellow rails at Seney National Wildlife Refuge. M.S. thesis. Ohio State Univ., Columbus, Ohio. 96 pp.
- TERRILL, L. M. 1943. Nesting habits of the yellow rail in Gaspe County, Quebec. Auk 60:171-180.
- TODD, W. E. C. 1940. Birds of western Pennsylvania. Univ. Pittsburgh Press, Pittsburgh, Pennsylvania. 710 pp.
- . 1963. Birds of the Laborador Peninsula and adjacent areas. Univ. Toronto Press, Toronto, Canada. 813 pp.
- VICKERY, P. D. 1980. Northeastern maritime region. Amer. Birds 34:875-877.
- WALKINSHAW, L. H. 1939. The yellow rail in Michigan. Auk 56:227-237.
- YANK, R., AND Y. AUBREY. 1984. Quebec region. Amer. Birds 40:1000-1001.
- , AND ———. 1985. Quebec region. Amer. Birds 39:889-890.
- , AND ———. 1986. Quebec region. Amer. Birds 40:1180-1182.
- , ———, AND M. GOSSELIN. 1987. Quebec region. Amer. Birds 41:1411-1413.

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### Note added in Proof

During 1991, three Yellow Rails were observed at the Passadumkeag site on 29 May by J. Markowsky, and one Yellow Rail was observed in Cutler, Washington Co., on 25 May by N. Famous.