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FIRST DOCUMENTED CASE OF A CAPTIVE-REARED SANDPIPER BREEDING IN THE WILD

PAUL E. PICKETT, LEWIS W. ORING,
AND ALBERT J. FIVIZZANI, JR.
Department of Biology
University of North Dakota
Grand Forks, North Dakota 58202 USA

Abstract.—In July 1985, 12 Spotted Sandpiper (*Actitis macularia*) eggs were incubated and hatched in captivity. Chicks were reared and maintained until May 1986. At that time, two males were released into their natural environment. One of the individuals bred successfully. This is the first documented case of a captive-reared sandpiper breeding in the wild.

PRIMER INFORME DE INDIVIDUO DE *ACTITIS MACULARIA* CRIADO EN CAUTIVERIO, QUE SE REPRODUCE EN EL ESTADO SILVESTRE

Resumen.—En julio de 1985, un total de 12 huevos de *Actitis macularia* fueron incubados en cautiverio, y 10 eclosionaron. Las aves fueron criadas y mantenidas en condición cautiva hasta mayo de 1986. Dos machos fueron liberados a su ambiente natural y uno de ellos logró reproducirse. Este constituye el primer informe de playeros criados en cautiverio que logra reproducirse en el estado silvestre.

Release of captive-reared birds has been used to augment populations of both nonendangered (Long 1981) and endangered species (e.g., Peregrine Falcon [*Falco peregrinus*] Barclay and Cade 1983, Hawaiian Goose [*Nesochen sandvicensis*] Ripley 1986). While there are several species of critically endangered sandpipers, there is no information on the practicality of a reintroduction program for members of this family. Thus, preliminary reintroduction attempts are valuable in helping to design scolopacid release programs.

Twelve Spotted Sandpiper (*Actitis macularia*) eggs were collected on Pine/Curry Island, Lake of the Woods, Minnesota in early July 1985. Eggs were incubated at the University of Minnesota Forestry and Biological Station, Lake Itasca, Minnesota, and 10 chicks hatched. The chicks were reared together, indoors, in cardboard and aluminum boxes. They were fed a diet that included wild-caught insects, hard-boiled eggs, mealworms, ground beef, baby cereal, carrots, vitamins, and calcium. When flight feathers began to develop, the eight surviving chicks were held by day in an outdoor free-flight pen. When fledged, chicks were housed in an indoor free-flight aviary with a built-in pond. The only change in diet was elimination of wild-caught insects. Birds were maintained initially on a 12 h light: 12 h dark photoperiod but were switched to a 16 h light: 8 h dark photoperiod in spring.

On 23 May 1986, two of the captive-reared males were released on Little Pelican Island, Minnesota, the site of an ongoing Spotted Sandpiper research project (see Maxson and Oring 1980, Oring and Knutson 1972, Oring and Lank 1982, 1986, Oring et al. 1983). Both birds were color-marked (RB:RA and AR:WW) and together occupied a previously vacant

territory. Initially, they spent their time feeding, neither actively defending the territory nor pursuing a mate. AR:WW was seen until 2 Jun., at which time he disappeared.

By 28 May, RB:RA had moved to Big Pelican Island and paired to a 7-yr-old female that had attempted to defend a territory on Little Pelican Island. This female laid a four-egg clutch with RB:RA, but contrary to the typical male-biased parental care of this species (Maxson and Oring 1980, Oring and Knutson 1972), RB:RA deserted the female and clutch. The female assumed all parental care, and the clutch hatched on 6 Jul. The fledging fate of chicks was undetermined.

RB:RA returned to Little Pelican Island on 12 Jun. On 13 Jun., he was paired and copulating with a resident female. The three-egg clutch of this pair was found on 20 Jun. RB:RA incubated from 20 Jun. until 5 Jul. He then deserted the clutch for no obvious reason, the fate of 7.6% of nesting attempts on Little Pelican Island (Oring, unpub. data). The female made no attempt to incubate the clutch. He remained on Little Pelican Island until 8 July 1986 but did not return in 1987 (Oring, pers. obs.).

Although the behavior of this captive-reared bird was not completely normal, this is, we believe, the first documentation of a captive-reared sandpiper breeding after release into a natural environment. Wild breeding by captive-reared Snowy Plovers (*Charadrius alexandrinus*) has also been recorded (G. Page, pers. comm.). Of 22 captive-reared Snowy Plovers released in California during August and September 1986, at least nine had bred (not all were successful) by October 1987.

The documentation of release experiments is important in order to evaluate their feasibility. Scott and Carpenter (1987) outlined a procedure for captive-reared release programs, emphasizing close monitoring of individuals and documentation of breeding success and survival. We followed these guidelines as closely as possible. Although further release experiments are necessary, preliminary results indicate that it may be feasible to restock wild populations with captive-reared birds—a tool important for management of threatened or endangered shorebird species.

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