

especially valuable reference point. Ovaries of nestlings lack the granular appearance of adult ovaries, but are distinguishable in being larger than testes and flattened against the kidney. Testes are ellipsoid as in adults, and stand distinctly separate from the kidney.

Most operations were completed within 3–6 min of the induction of anesthesia. The outer incision was closed with a liquid skin adhesive (New-Skin; New-Skin Co., Cody, WY), which accelerated healing when it remained in place but often peeled off too rapidly; best results were obtained with a very thin application, and by keeping the bird restrained, except for the left leg, until the adhesive dried. Young nestlings tended to cool off during the operation and were placed on a heating pad during recovery. It was difficult to judge alertness of very young birds, but most were capable of movements immediately after the operation, and gaping was not unusual within several minutes. Most nestlings healed completely or had only a small scab by fledging (approximately day 9–10), and some healed much sooner. No serious negative effect on growth was noted in most individuals.

The most common complication was renal hemorrhage, but in only a few cases was it so severe as to prevent the completion of the operation or to lead to noticeable ill effects later. It could be minimized by careful use of the forceps, especially by confining probing motions to the longitudinal axis as much as possible. It is difficult to avoid damaging the air sac, and such damage may lead to subcutaneous emphysema. Although unsightly, the bubble is not obviously uncomfortable or harmful to the bird, and it eventually disappears (cf., Risser, 1971).

I usually removed an entire brood from a nest at once. Usually all could be brought to the lab, laparotomized, and returned to the nest within 1–1.5 hr. Very few broods were abandoned, mostly following prolonged absences, and in fact a few times I found the mother brooding the empty nest upon my return.

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Nest-shifting by a DOWITCHER.—The shifting of eggs or nest sites as a result of disturbance during incubation is an unusual event. The most spectacularly documented case involved a Pileated Woodpecker (*Dryocopus pileatus*) that was photographed carrying its eggs from a damaged nest cavity. Further details are not available, but the eggs apparently failed to hatch (Truslow, *Nat. Geogr.*, **130**: 882–884). Although nest-shifting might seem a simpler task for ground-nesting birds, there are remarkably few reports (e.g., *Coragyps atratus*: Thompson, "A New Dictionary of Birds," p. 523, 1964; *Caprimulgus carolinensis*: Ferguson, *Wilson Bull.*, **79**: 452–453, 1967). Most of the shorebirds that I have studied (e.g., *Micropalama himantopus*: Jehl, *Wilson Bull.*, **85**: 114–147, 1973) are highly resistant to disturbance and continue to incubate even though the adults have been trapped and banded early in incubation and the nest sites visited daily during the entire period. Yet, there are limits of disturbance that cannot be transgressed.

On 27 June 1967, I found a Short-billed Dowitcher (*Limnodromus griseus*) nest containing four slightly pipped eggs atop a small sedge hummock at Churchill, Manitoba. Early on 6 July, I erected a blind 20 ft from the nest and late that day moved it to

approximately 10 ft and parted some of the overhanging sedges for photography. At my next visit, on the morning of 8 July, the nest was empty; there was no evidence of predation and I assumed that the chicks had hatched successfully. While dismantling the blind, however, I flushed the male dowitcher from a newly completed nest 22 in from the original nest and about three in lower on the same hummock. It contained one wet chick and one well-pipped egg; the male's behavior indicated that the other chicks had already hatched and were secluded nearby. The female was not present and did not respond to the male's persistent alarm calls. Evidently the close proximity of the blind was intolerable to the male, which responded by rolling the eggs to a somewhat safer sight.

I know of no other reports of nest-shifting in shorebirds, whose typical reaction to extreme disturbance is to desert the clutch. In this case, the advanced condition of the embryos probably stimulated the male to remain in attendance and to shift the eggs instead. There are persistent rumors of woodcock (*Scolopax* and *Philohela*) and other shorebirds carrying their chicks to safer locations (see Sheldon, "The Book of the American Woodcock," U. Mass. Press, 1967; Lowe, *Ibis*, **114**: 106–107, 1972), although verification is unsatisfactory and other interpretations (op. cit.) seem more likely.—JOSEPH R. JEHL, JR., *Hubbs/Sea World Research Institute, 1700 South Shores Road, San Diego, CA 92109*. Received 15 April 1979, accepted 31 May 1979.

Red-cockaded Woodpecker Stuck in Cavity Entrance Resin.—Red-cockaded Woodpeckers (*Picoides borealis*) are unique in that they excavate nest and roost cavities only in living pine trees. The birds excavate resin wells completely around cavity trees, above and below the cavity. The resin flow apparently serves as a defense mechanism (Ligon, *Auk*, **85**: 203–215, 1970; Jackson, *Bird-Banding*, **49**: 187–188, 1978). The present report represents the first discovery of a Red-cockaded Woodpecker becoming stuck in cavity entrance resin.

Fresh resin is potentially hazardous to birds. A dead Eastern Bluebird (*Sialia sialis*) and an unidentified warbler (Parulidae) have been found stuck in the resin flow of a Red-cockaded cavity tree (Dennis, p. 79 in *The Ecology and Management of the Red-cockaded Woodpecker* (R. L. Thompson, ed.), Bur. Sport Fish. Wildl. and Tall Timbers Res. Sta., Tallahassee, 1971). Similarly, Kilham (*Auk*, **89**: 451–452, 1972) reported finding a Red-breasted Nuthatch (*Sitta canadensis*) stuck to pitch in the entrance to its nest cavity.

On 23 May 1978, in the Angelina National Forest, 65 km SE of Lufkin, Texas, we discovered a dead Red-cockaded Woodpecker in the only cavity in a longleaf pine (*Pinus palustris*), approximately 4 m above ground. Only the head of the bird protruded from the cavity. Some dry white resin was on the tree but no recent flow. On 25 May 1978, we photographed and removed the bird, an adult female (identifying characteristics in Jackson, *Bird-Banding*, **50**: 23–29, 1979) from the cavity entrance. The bird's synsacral region was stuck to the cavity entrance tube, with the right flank having the greatest contact. Resin had completely penetrated the feathers and come into contact with the skin on the right flank. The left wing was folded up against the body, and the right wing and tail extended inside the cavity as if the bird had struggled after becoming stuck. An X-ray of the intact carcass revealed no structural deformities, no broken bones, and no lead shot.

Measurements of the cavity entrance tube did not appear to differ from previously reported measurements (Jackson, p. 103–112 in *Endangered Birds, Management Techniques for Preserving Threatened Species* (S. A. Temple, ed.), U. of Wisconsin Press, 1978). The floor of the cavity entrance tube was beveled, producing an upward slope for the initial 5 cm of its 11-cm total length. The remainder of the entrance sloped slightly downward to the cavity. The woodpecker was stuck at the narrowest portion of the entrance tube, where the tube began its downward slope. Cavity entrance tubes of this shape are characteristic for Red-cockaded Woodpeckers, at least in East Texas.

A natural trough-like depression enabled enough resin to flow into the cavity entrance tube to form a pool. This trough-like depression is absent in most Red-cockaded cavity trees, or if present, the depression is shallower so that resin flows onto the outer, beveled portion of the entrance and down the outside of the tree.

Although possibly the bird was weakened or died of disease or old age, we suggest