OLSON, S. L., H. F. JAMES, AND C. A. MEISTER. 1981. Winter field notes and specimen weights of Cayman Island Birds. Bull. Br. Ornithol. Club 101:339–346.
PEREZ RIVERA, R., AND R. COTTE SANTANA. 1977. Algunas notas sobre los Falconiformes de Puerto Rico. Science-Ciencia 4:89–95.
RAFFAELE, H. A. 1983. A guide to the birds of Puerto Rico and the Virgin Islands. Fondo Educ. Interamericano, San Juan, Puerto Rico.
RITTER, K. 1836. Naturhistorische Reise nach der west indischen Insel Hayti auf Kosten Sr. Majestät des Kaisers von Oesterreich. Stuttgart.
RIVERA CIANCHINI, O., AND L. MOJICA SANDOZ. 1981. Pajaros notables de Puerto Rico. Editorial Universitaria, San Juan.
SLOANE, H. 1707. A voyage to the islands Madera, Barbados, Nieves, St. Christophers and Jamaica with the natural history of the herbs and trees, four-footed beasts, fishes, birds, insects, reptiles, etc. of the last of those islands. London.
SMITH, N. G. 1980. Hawk and vulture migrations in the neotropics. Pp. 51–65 *in* A. Keast and S. Morton, eds. Migrant birds in the Neotropics: ecology, behavior, distribution, and conservation. Smithsonian, Washington, D.C.
SPRUNT, A., JR. 1962. Birds of the Dry Tortugas. Fla. Nat. 35:35–40.
STEWART, P. A. 1977. Migratory movements and mortality rate of Turkey Vultures. Bird-Banding 48:122–124.
STOCKTON DE DOD, A. 1978. Aves de la Republica Dominicana. Mus. Hist. Nat., Santo Domingo.
U.S. DEPARTMENT OF COMMERCE. 1978. Bureau of the Census; Census of Agriculture. U.S. Dept. Comm., Washington, D.C.
WADSWORTH, F. H. 1950. Notes on the climax forests of Puerto Rico and their destruction and conservation prior to 1900. Carib. Forest. 11:38–47.
WETMORE, A. 1927. The birds of Porto Rico and the Virgin Islands. Sci. Survey of Porto Rico and the Virgin Islands, IX. N.Y. Acad. Sci., New York.
———, AND B. H. SWALES. 1931. The birds of Haiti and the Dominican Republic. U.S. Natl. Mus. Bull. 155. Gov. Print. Office, Washington, D.C.

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Adaptability of Parental Behavior in the Mourning Dove.—We report a nesting of the Mourning Dove (*Zenaida macroura*) that suggests individuals have enough behavioral adaptability to respond to unusual disturbances of the nest and its contents. On 1 October 1982 at about 1430 h, Krebs saw an adult dove squatting on a mowed lawn beneath the branches of a tall (12 m) eastern red cedar (*Juniperus virginiana*) on the campus of St. Mary's College of Maryland. A loosely formed stick nest lay on the ground about 1.5 m from the bird. One passerby reported that the bird had been there since noon.

At about 1500 h we approached the bird and when Krebs bent to pick it up, it flew into the overhanging branches, uncovering a vigorous nestling. Inspection of the surrounding ground revealed a dead nestling of the same apparent developmental age near the nest. From measurements of the dead nestling and the formula of Holcomb and Jaeger (J. Wildl. Manage. 42:843–852, 1978) the estimated age at death was 5 d. Apparently the accident had happened that morning, as the dead nestling was cold but still quite fresh. We estimate from its appearance that the survivor was also 5 d old, but it may have hatched a day before or after its dead nest mate (Nice, Auk 39:457–474, 1922).

We tied the nest into a convenient fork near the end of a low, drooping branch at a height of 1.8 m, and set the surviving nestling on the nest. The next day, 2 October, we saw an adult brooding on the nest and on 3 October Krebs saw one adult brooding and feeding the nestling with a second adult perched nearby in the same tree. By 6 October the

nestling was almost fully feathered. At 1330 h, while Willoughby was photographing the brooding adult and nestling from a distance of 0.7 m the adult suddenly flew from the nest, followed immediately by the juvenile, which flew to the ground in a well-coordinated manner. Because the fledgling did not appear able to sustain level flight, Willoughby put it back on the nest and retreated. At 0820 the next day, the nest was empty. We assume the fledgling left the nest voluntarily, but we did not see it or the adults depart.

From their study of 58 Mourning Dove nestlings, Holcomb and Jaeger (1978) concluded that the usual fledging age was between 10 and 11 d. For a nestling 5 d old on 1 October, that age would occur on 6–7 October. Thus this young dove had attained a normal fledging age when it left the nest.

These observations indicate that at least one of the adults was able to adapt its parental behavior to disturbances in the following ways. (1) It located and brooded a nestling that survived the fall from the tree, although it was on a lawn some distance (1.5 m) from the fallen nest. (2) After we put the nest back in the tree, an adult found the nestling and cared for it adequately, although the nest was in an abnormal position at the end of a branch instead of on a more substantial horizontal branch closer to the trunk as favored by this species (Nice 1922; Tyler, U.S. Natl. Mus. Bull. 162, 1932). (3) Despite daily close approach to the relatively exposed nest by human pedestrians and observers, an adult fed and brooded steadily and the young left the nest at a normal fledging age. These observations also indicate that these doves' primary attachment was to the nestling, regardless of its location, rather than to the nest or nest site.—ERNEST J. WILLOUGHBY, *Division of Natural Science and Mathematics, St. Mary's College of Maryland, St. Mary's City, Maryland 20686* AND CHARLES T. KREBS, *9 Menzie Grove, East Ivanhoe, Victoria, 3079, Australia.* Received 10 Jan. 1986; accepted 16 Apr. 1986.

Effect of Laparotomy of Tree Sparrows and Dark-eyed Juncos during Winter on Subsequent Survival in the Field.—Laparotomy may be necessary to determine sex in wild birds, but knowledge of its effect on long-term survival is critical to later analysis of population data. Information on survival during and immediately after the operation (Fiala 1979, Risser 1971) and on survival of laparotomized nestlings to the age of leaving the nest (Blank 1981, Howe 1976) points to little mortality during those short periods. Similarly, survival rates of laparotomized caged birds living in protected and sometimes unnaturally aseptic environments tend to be high (Bailey 1953, Risser 1971). Reliable data on laparotomized birds released into the wild are few (but a notable exception is Wingfield and Farner 1976; see also Bailey 1953 and Miller 1959). In working with winter populations of small birds often subjected to severe weather, we thought it desirable to assess the effects of laparotomy using capture-recapture methods. We report recapture rates of Tree Sparrows (*Spizella arborea*) after laparotomies performed earlier in the same winter and of Dark-eyed Juncos (*Junco hyemalis*) laparotomized in one winter and recaptured in another.

Methods corresponded closely to those described by Risser (1971), except that we used ether as our anesthetic. A few birds died while we were improving our technique, both in administration of the anesthetic and in performing the operation, and we include in the data below only individuals that appeared healthy when released about 1 h after the operation. Some laparotomized birds were recaptured frequently (for as much as 2 mo), and inspection revealed that the incision was fully scabbed and uninflamed after about 1 wk. Accordingly, we treat any Tree Sparrow recaptured at least 8 d after its laparotomy (including the days of operation and recapture) as having fully recovered. A few laparotomized Tree Sparrows that were recaptured after less than 1 wk and in apparently healthy, healing condition are excluded from the samples reported below because their cases are ambiguous. Consequently we also excluded the few unlaparotomized individuals that were recaptured only within 1 wk of having been released.

Tree Sparrows.—At Bloomington, Indiana, in the winter of 1975–1976, we captured 78 Tree Sparrows between 15 December and 15 February. Fifty-four of these birds were anesthetized and operated on and 24 others, intended as controls, were anesthetized but not subjected to the operation. We made daily efforts to recapture the birds until 25 March. Capture and release dates were similarly distributed in the two treatment groups. Of the