3 min, a Marbled Murrelet flew to the nest when Ford was 3–4 m away. On 28 July, an adult Marbled Murrelet flushed from the nest as we approached. The pipping egg was rocking in the nest. We set an 8 mm video camera near the nest to record the adult's return and departed at 05:12. At 05:17, an adult Marbled Murrelet landed at the platform and approached to within 10 cm of the egg. It sat almost motionless, near the egg, until flushing at 05:29 upon our approach. Approximately 2 min later, before we could leave the nest site, the adult flew to within 1 m of the nest before flying away again.

On 2 August, Ford found the nest unattended. Eggshell fragments were located at the foot of the cliff below the nest. Absence of a nestling, the condition of the eggshell fragments, and the lack of fecal material in the nest suggested that the egg (or nestling if it hatched) had been destroyed by a predator. The persistent behavior of the adult Marbled Murrelet(s) around the nest while we were present in the area indicated that it probably did not abandon the nest until the egg (or nestling) was destroyed.

The nest was on a platform of moss (*Hylocomium splendens* and *Rhytidiadelphus loreus*) on top of three intertwining roots of a western hemlock (*Tsuga heterophylla*), 26.7 cm in diameter at breast height (dbh) and approximately 15 m tall, at the top edge of a cliff. The nest platform was suspended 11 m above the foot of the cliff. The nest platform was 65 cm × 35 cm and 4 cm deep with no evidence of nest construction. The tree was on a west-facing (260°) 38° slope, at 195 m elevation. The bird(s) departed from and approached the nest on the down-slope side of the cliff (245°), and we observed one possible landing pad on this side, a worn area on a moss-covered root about 40 cm from the nest. The tree was approximately 13 km from the nearest salt water in an old-growth, uneven-aged stand of western hemlock-western red cedar (*Thuja plicata*). The mean dbh of the trees (>2.5 cm dbh) within a 25-m radius plot was 23.6 cm (SD = 20.4, range = 2.5–114.3 cm, N = 184). The primary ground cover plants were menziesia (*Menziesia ferruginea*) and blueberries (*Vaccinium alaskaense* and *V. ovalifolium*). This nest was unusual because it exhibited dual nest placement characteristics (ground and tree). When approached from up slope, it was at ground level, although the platform was on tree roots. When approached from down slope, it appeared similar to more typical Alaskan tree nests in that the nest platform was >10 m above the ground. The characteristics of the platform and nest cup were also similar to other tree nests in Alaska (Naslund et al., unpubl. data). We know of four other intact Marbled Murrelet eggs that have been found on the ground in forested habitats. Two (UWBM 43098 and UWBM 43031) were found on Long Island, Washington, and appeared to have fallen out of tree nests or have been moved by predators (J. Atkinson, pers. comm.). Two were found on Prince of Wales Island in 1993, one in an open muskeg (M. Minnillo, pers. comm.) and the other along the edge of a tributary of the Thorne River (S. Seaford, pers. comm.). It is not known whether either of these eggs came from ground or tree nests.

CHERI FORD, *Thorne Bay Ranger District, Tongass National Forest, Thorne Bay, Alaska, 99919;* AND MIKE BROWN, *Ketchikan Area Supervisor's Office, Tongass National Forest, Ketchikan, Alaska 99901.* *Received 1 Mar. 1994, accepted 27 May 1994.*

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The parasitic blow fly, *Protocalliphora spatulata,* in two new host species.—Larvae of the parasitic blow fly *Protocalliphora spatulata* (Diptera: Calliphoridae) were found on two new host species, Savannah Sparrows (*Passerculus sandwichensis*) and White-crowned Sparrows (*Zonotrichia leucophrys*) during the summers (25 May to 25 July) of 1990–1993

on the Delta Agriculture Project (44,500 ha) located south of the Tanana River approximately 150 km east of Delta Junction, Alaska (64°00′N, 145°20′W). The area is a mosaic of different-aged small grain and hay fields cleared from the surrounding forest of black spruce (*Picea mariana*), white spruce (*P. glauca*), and aspen (*Populous tremuloides*). Cereals (mainly barley), grass seed, and hay are the primary crops grown in this area. Approximately 8900 ha of the project is currently in agricultural production. The majority of the area (35,600 ha) is idle or in government set-aside programs. Vegetation on the idle and set-aside sites is comprised of a variety of grasses (*Calamagrostis* spp., *Agropyron* spp., *Festuca* spp.) and forbs (*Epilobium* spp.), interspersed with willow (*Salix* spp.) and aspen (*Populus* spp.) windrows.

Sparrow nests were located by flushing the adults from their nests and were visited daily until the first egg hatched (day 0), and then revisited four and seven days later. Nestlings were banded under U.S. Fish and Wildlife Service Permit Number 20819. Larvae often were removed from the sparrows, or fell off when handled, and were reared to adults for identification. Specimens were deposited in the C.P. Gilette Museum of Arthropod Diversity at Colorado State Univ. Larvae were found on 43 of 395 Savannah Sparrow nestlings over four years. The percent of parasitized Savannah Sparrow nests was 17.9% (N = 28) in 1990, 25.7% (N = 35) in 1991, 31.4% (N = 35) in 1992, and 63.3% (N = 16) in 1993. Parasitized nests contained an average of 66% (SE = 5.7) parasitized nestlings. Most parasitized nestlings were seven days old and the blow fly larvae were often fully developed by the time the young fledged, typically at nine days post-hatch. Larvae were most often found on the wings (48% of 189 larvae) but were also found on the face (21%), body (13%), head (7%), legs (5%), feet (3%), back (2%), and neck (1%). The average parasite load per individual parasitized Savannah Sparrow was 2.9 (SE = 0.29, range 1–10). In 1993 three dead Savannah Sparrows were found in one nest on the seventh day after hatching. A total of 41 *P. spatulata* larvae were collected from the three nestlings. Only five White-crowned Sparrow nests were found during 1990–1993. However, 100% of the nestlings were found to harbor *P. spatulata* larvae. White-crowned Sparrows also nest on the ground, concealed by vegetation (Harrison 1978); however, they typically were associated with the forest edge on our study site.

P. spatulata is distributed from Alaska to western Ontario and south to California and New Mexico (Sabrosky et al. 1989). It is found chiefly at high elevations, typically in rocky alpine tundra. However, the nearest tundra habitat is over 50 km from our study site. *P. spatulata* has only three previously reported hosts; Horned Larks (*Eremophila alpestris*) (Verbeek 1967), American Pipits (*Anthus rubescens*) (Verbeek 1970), and Rosy Finches (*Leucosticte arctoa*) (Sabrosky et al. 1989).

Similar to *P. braueri, P. spatulata* larvae produce myiasis by burrowing into the subcutaneous tissue of the host. In other *Protocalliphora* spp., this habit can lead to substantial host tissue damage (Howe 1991). However, *P. hirundo* is the only member of the genus confirmed to be an obligate subcutaneous parasite and has also been found in Savannah Sparrows (George and Mitchell 1948, Bedard and McNeil 1979, and Garrison et al. 1986).

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JEANNE M. FAIR, *Dept. of Fishery and Wildlife Biology, Colorado State Univ., Fort Collins, Colorado 80523;* AND CLINTON K. MILLER, *Dept. of Fishery and Wildlife Biology, Colorado State Univ., Fort Collins, Colorado 80523* (Present address: *City of Boulder, Dept. of Open Space/Real Estate, Operations Center, 66 South Cherryvale Road, Boulder, Colorado 80303).* *Received 28 April 1994, Accepted 12 Sept. 1994.*

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Fruit in the diet of nestlings of the Puerto Rican Tody, a tropical insectivore.—Many tropical frugivorous birds supplement the diet of their nestlings with insects, particularly in the early stages of development (Lack 1968, Skutch 1969, Morton 1973). In some of these cases, the nestling diet is exclusively insects (e.g., Skutch 1944). Although some frugivorous birds feed their young entirely on fruit as well (e.g., D. W. Snow 1962, B. K. Snow 1970), the growth rates of chicks of such species are relatively slow (Ricklefs 1976). Fruits are generally low in nutritional value, and the supplemental use of insects high in protein may enable tissue growth to proceed more rapidly (Morton 1973, Ricklefs 1976, Reinecke 1979). The opposite case, of birds which are insectivorous as adults feeding fruit to nestlings, is extremely unusual (Morton 1973) although not undocumented (e.g., Ligon 1970). Here I report observations of a tropical insectivorous bird, the Puerto Rican Tody (*Todus mexicanus*), supplementing the insect diet of its nestlings with fruit.

I observed (through binoculars) a pair of Puerto Rican Todies feeding nestlings from 8 July to 16 July 1993 in the Maricao Forest Reserve, Puerto Rico (18°09′N, 67°00′W). The nest was a burrow beneath the roots of a tree in an embankment. I report here only feeding observations which I was able to record for at least 30 min without interruption, for a total of 7.5 h. Due to the abrupt angle of the tody's nest burrow, I was unable to determine either the number or age of the nestlings.

As adults, todies are wholly insectivorous, and Kepler (1972) reports an exclusively insectivorous diet for the nestlings as well. In my observations at the nest in Maricao, the majority of the food items brought appeared to be either lacewings (Neuroptera) or moths (Lepidoptera). However, 30 of the 163 feedings I witnessed (18.4%) consisted of a single type of fruit, the small, bright orange fruits of a tree, *Clusia krugiana* (Guttiferae). During my observations, these trees were in full fruit, and many other species of birds I caught during the same time period showed evidence of having recently eaten the same fruits. The