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The response of adult Red-cockaded Woodpeckers to a fallen nestling.—On 31 May 1990, while watching a pair of Red-cockaded Woodpeckers (*Picoides borealis*) feeding two 20-day-old nestlings, we observed the following behavior. At 6:30 DST, the adult male flew to the entrance of the nest cavity with prey. He did not immediately offer the prey to the nestlings, but hesitated at the entrance for several seconds. One of the nestlings lunged forward, apparently to snatch the prey from the adult, only to lose its balance and fall from the 12-m-high cavity to the ground where it remained out of sight near the base of the cavity tree. Both adults continued to feed the nestling still in the cavity, but did not approach the one on the ground, even though it called periodically. After ca 1.5 h, the adult female flew to the base of a pine (1 m from the base of the nest tree), positioning herself 0.5 m above the ground. She called continuously to the fallen nestling, which replied. The adult then flew to the base of the nest tree, again staying 0.5 m above the ground. I could not see the nestling, but I could hear it calling constantly. The adult began to hitch up the bole of the nest tree while continuing to call. The nestling came into view clumsily hitching up the bole behind the adult. The adult frequently looked back at the young bird and stopped periodically. After climbing to ca 4 m above the ground, the nestling lost its foothold and fell again. The adult immediately flew down to the base of the tree and the process was repeated. After four such episodes, the adult flew off. We interpret this adult behavior as attempts to guide the nestling up the tree. While the adults were away, the nestling hitched about 1.5 m up the nest tree and stayed there for 1.5 h. It gave begging calls each time an adult flew to the nest cavity, but it was never fed. The adults fed only the nestling that remained in the cavity.

After completing 3 h of feeding observations, we obtained five cerambycid larvae (southern pine sawyer, *Monochamus titillator*) from some pine slash (tree tops and major branches lying on the ground) left over from a thinning operation and fed them to the fallen nestling. The adult male had been observed obtaining larvae by foraging on the logging slash.

We returned one hour later to find the nestling in the same spot. Soon an adult (sex

unknown) flew to the nestling and fed it. Again, the adult appeared to guide the young bird up the bole. At 4 m, the nestling stopped. The adult hitched up the bole a few meters in front of the nestling and then flew back down to it, calling all the while. After repeating this several times, without the nestling moving further, the adult flew off. Shortly thereafter, we placed the nestling back in the nest cavity. Both nestlings fledged a few days later.

The adult behavior may have served one of two functions. It is possible that the adults were attempting to guide the fallen nestling back to the cavity, suggesting the adults somehow sensed that it was too soon for normal fledging. Perhaps Red-cockaded Woodpecker nestlings falling from cavities occurs with enough frequency to have selected for such adult behavior. Alternatively, the adults may have been attempting to guide the young bird to cover in the crown of the tree. The use of various calls and motions is common parental behavior among birds and serves to encourage their young to follow them to safety. Unfortunately, the fallen nestling never reached cavity height.

Our observation of a male Red-cockaded Woodpecker feeding on pine logging slash is relatively unique. Red-cockaded Woodpeckers forage mainly on live pines, to a much lesser extent on pines that have died recently, and on hardwoods (Hooper and Lennartz, *Auk* 98: 321–324, 1981; Porter and Labisky, *J. Wildl. Manage.* 50:239–247, 1986). To our knowledge, there are very few reports in the literature of Red-cockaded Woodpeckers feeding on pine slash (Ligon, *Auk* 87:255–278, 1970; Hooper and Lennartz 1981). We have also observed Red-cockaded Woodpeckers foraging on windthrown pines on two occasions. If Red-cockaded Woodpeckers feed regularly on slash left during cuts made to treat southern pine beetle infestations, insecticides sprayed on slash during some treatments (Swain and Remion, *USDA Agric. Handb.* 575, 15 pp., 1981) could be harmful to the woodpeckers.

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Learned song variations in British Storm-Petrels?—The occurrence of dialects in the songs of Oscine songbirds is well known (e.g., Baker and Cunningham 1985) and usually is attributed to the prevalence of song learning among those species (Lemon 1975, Slater 1989). Vocal learning has been described in several other avian groups (e.g., Baptista and Schuchmann 1990, Sparling 1979) but not in the Procellariiformes. It is, therefore, interesting that James (1985) has found geographical variation in calls of the Manx Shearwater (*Puffinus puffinus*) and also in the purring song that male British Storm-Petrels (*Hydrobates pelagicus*) produce in their nesting crevices during the breeding season. This song or purr-call consists of a rapid trill of brief clicks (the purr), followed by a flourish of wide frequency band noise, known as the breath-note. The purr is rather over 1 sec in length, and the breath-note lasts about 0.25 sec; a series of songs is produced in quick succession with only 0.01–0.03 sec between them. James found significant differences among four sites in the click rate within the purr, in breath-note length, and in the gap between songs. The most marked differences were between birds recorded on Puffin Island, S.W. Ireland, and Mousa in the Shetland Islands, N. of Scotland, two sites some 1100 km apart.

If these geographical variations stem from learning, we might also expect to find micro-geographic variation in the song, as is usual in Oscines. For example, territorial songbirds