A HERMIT THRUSH FORAGING FOR NORTHERN RED-BACKED SALAMANDERS

by Frederick Thurber

On October 29, 1996, Geoff Dennis of Little Compton, Rhode Island, observed Hermit Thrushes (*Catharus guttatus*) feeding on American holly (*Ilex opaca*) berries in the wood lot behind his house on East Main Road. On a whim, Geoff tried playing a tape of the Hermit Thrush's spring advertising song to attract the thrushes and was surprised to see a Hermit Thrush fly in to investigate.

Over the next couple of weeks, Geoff repeatedly called in the Hermit Thrush. The bird showed very little fear of Geoff and much curiosity about the tape. Next Geoff tried feeding the Hermit Thrush earthworms dug from a compost pile, or holly berries, and the bird readily accepted these offerings. Eventually the thrush became so habituated to Geoff that it would take an earthworm off Geoff's foot or from beneath his camera tripod. During one of these encounters, the thrush appeared to doze off under the camera tripod only inches from Geoff's feet.

After a couple of weeks, I joined Geoff in his encounters with this Hermit Thrush. A typical session would begin with us setting up our photographic equipment and beginning the Hermit Thrush tape. Typically, within a minute we would hear the *chuck* notes of the bird in the underbrush. From there, the thrush

Foraging Hermit Thrush (*photographs by the author*)

would usually circle us, always in a counterclockwise direction, moving around us by running along the ground and making short hops or flights onto low perches. The route the thrush took was stereotyped; it repeated the same route every day, right down to the same twigs and perches. Its favorite perch was a mossy stump about a meter off the ground; this perch was used so predictably that we would aim our camera there before calling in the bird. The thrush usually circled 5-10 meters from us, although it occasionally ventured in close when lured in with an earthworm. Geoff and I never used a blind, but the thrush was startled by any sudden motion.

The tameness of this bird allowed for some interesting observations of its behavior and vocalizations, in addition to presenting many outstanding photographic opportunities. In response to the tape, the thrush would sometimes sing a "whisper song" or issue a soft whistle. It would also occasionally assume the "high intensity" tail-raising position described by Jones and Donovan (1996). When anything large flew overhead, including airplanes or soaring Herring Gulls, the thrush would assume the "freezing crouch" (Jones and Donovan 1996).

The "freezing crouch"

The most interesting observation we made of this Hermit Thrush was of its foraging for northern red-backed salamanders (*Plethodon cinereus*). During each session with this bird, we observed one or two "foot-quivers" lasting 1-3 seconds. A foot was placed in the leaf litter and vertically strummed up and down on a leaf, creating a buzz-like sound. We initially assumed that this behavior was a territorial reaction in response to the tape. But on January, 4, 1997, we revised our impression of the function of the "foot-quiver." While I was tracking the Hermit Thrush through my 400 mm lens from about 4 meters away, I was able to closely observe a "foot-quiver." To my surprise, I saw the bird flush a red-backed salamander. The thrush did not consume the salamander immediately, but rather pecked at it, looked around, pecked again, looked around, and then finally swallowed it in one very rapid motion.

Excited by this discovery, Geoff and I ran into the woods to turn over logs in a search for salamanders. We caught three red-backed salamanders, one which was the "lead" variant, and as an experiment, we put them on the mossy stump along with some earthworms and holly berries. The Hermit Thrush ate the salamanders in preference to the worms and berries. Sometimes when eating the salamanders that we caught for it, the thrush would break off the salamander's tail and consume that first. At other times the thrush would thrash the

salamander in the air very rapidly before swallowing it. As the weather got colder, the red-backed salamanders retreated deeper into the soil and became harder to find. Interestingly enough, the foot quiver was heard less and less as the weather cooled. "Foot-quiver" has been observed in Hermit Thrush at least once before (Ramsey 1992), as well as in other *Catharus* Thrushes (Yong and Moore 1990), but this behavior has never been associated with taking vertebrate prey.

As far as I can tell, Hermit Thrushes have never before been observed foraging for red-backed salamanders. However, Bent describes a number of "Eastern" Hermit Thrushes that brought these salamanders to their nests or had them in their stomachs. Red-backed salamanders have also been recorded as a food source for Wood Thrushes (*Hylocichla mustelina*): a Wood Thrush was recently found with red-backed salamander remains in its stomach (Holmes and Robinson 1988).

Why has this foraging behavior never been noted before? One reason could be that this behavior is extremely difficult to observe in the field. I had to be very close, and looking through a telephoto lens, to see the salamander in the leaves after the "foot-quiver." When the Hermit Thrush ate the salamanders, even the ones we caught for it, they were swallowed so fast that they appear as blurs in all our photos.

Although Geoff Dennis's Hermit Thrush, plus the ones reported on by Bent, represents a small sample size, the implications of this foraging behavior are interesting. At Hubbard Brook Experimental Forest in New Hampshire, Burton and Likens (1975) showed that northern red-backed salamanders were one of the primary biomass components of that northern hardwood forest. Could the red-backed salamander be an overlooked, but important, food source for ground-foraging birds such as Hermit Thrushes?

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