ground, because of the fallen trees, was altered as described. If the trees had been upright, all the nests would have been within three feet of the central axis.

The Amakihi, on the other hand, builds statant cupped nests usually placed on top of a forked branch and seems to prefer the area eight feet and outward from the main axis of the central trunk. The Amakihi that superimposed its nest on the one of the Elepaio, placed the structure 12 feet from the central axis, well within the zone of typical Amakihi nest placement and well outside the zone preferred by the Elepaio. As these two species nest in nearly identical habitat space, it is possible that this may be an overlap in habitat preference for nest-site selection.

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SHRIKES FEED ON PREY REMAINS LEFT BY HAWKS

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I have observed an interesting relationship between Marsh Hawks (*Circus cyaneus*; also one Rough-legged Hawk, *Buteo lagopus*) and Loggerhead Shrikes (*Lanius ludovicianus*) in the grasslands of southeastern Arizona. The landscape is dotted with old yucca stumps that are used as resting and eating perches by various hawks. After watching the hawks for some time, I realized that a Loggerhead Shrike was concurrently present with each hawk. As a hawk left a feeding perch, almost invariably a shrike flew to the recently vacated spot and began feeding.

I investigated and recorded several of these shrike-follow-hawk instances. The feeding perches of the hawks were littered with fur and meat scraps of the hawk's prey, which apparently attracted the shrikes. I believe that the shrikes recognized the food opportunity and were alert to the feeding activities of the hawks. I once noticed a shrike calling near a perched Rough-legged Hawk. Within a few minutes, the hawk caught a rodent and returned to a yucca stump to feed, showing no recognition of the shrike even when the latter flew within ten feet and continued to call. When the hawk finished feeding and flew away (a period of about two min), the shrike flew to the vacated feeding perch and began to peck at the stump, where I subsequently found fresh blood.

I have not found any published remarks on such a commensal relationship between shrikes and hawks. In fact, the only reference I have found to hawk-shrike relations is that shrikes avoid hawks as potential predators (Cade, Living Bird 6:43–86, 1967). Although shrikes usually hunt "by watching and waiting for prey . . . or by moving actively about . . . in apparent attempts to flush quarry into flight" (Cade, op. cit.), it has also been noted that "carrion is sometimes eaten" (Bent, Natl. Mus. Bull. 197:142, 1950). While it is not unusual for shrikes to scavenge, it is interesting that they might learn to watch and benefit from birds they normally would avoid.

Shrikes are noted for their phenomenal vision, alertness, and aptitude for learning and association. The Northern Shrike (*L. excubitor*) exhibits "highly developed ability to return to specific locations which it has learned to associate with activities of prey, such as mouse holes, bird nests, and wasp nests" (Cade, op. cit.). We can now add the feeding perches of hawks to that list of food sources.

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ADDITIONAL EXPLOITERS OF NECTAR

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AND
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Within the last two years four observers have reported on the nectar feeding habits of various North American birds other than hummingbirds. In this note we would like to summarize these reports and, from our own observations and correspondence with other interested persons, add 12 new birds to the growing list.

The following birds have been observed to feed on sugar water ("man-made nectar") provided in various types of feeders, principally for hummingbirds: House Finch (*Carpodacus mexicanus*; Taylor 1973), Hooded Oriole (*Icterus cucullatus*; Fisk 1973), Hooded Oriole and Scott's Oriole (*I. parisorum*; Leck 1974). The House Finch, Scott's Oriole, Cactus Wren (*Campylorhynchus brunneicapillus*), Scrub Jay (*Aphelocoma coerulescens*), and Plain Titmouse (*Parus inornatus*) have also been seen feeding at hummingbird feeders by George H. Fisler (pers. comm. 1974). In Loma Linda, California, we have had House Finches and more recently Purple Finches (*Carpodacus purpureus*) as regular customers at our feeders. Hooded Orioles also visit routinely.

In addition, Mrs. A. J. Zimmermann (pers. comm. 1973, 1974) reports that she has had eight species of birds visiting her hummingbird feeders located in Ajijic, Jalisco, Mexico. These include three species of resident Mexican orioles: Wagler's (*Icterus wagleri*), Abeille's (*I. abeillei*), and Streakbacked or Scarlet-headed (*I. pustulatus*); and three which breed in the U.S. and winter in Mexico: Baltimore (*I. galbula galbula*), Bullock's (*I. galbula bullockii*), and Hooded (*I. cucullatus*). The Baltimore Oriole is also a regular visitor at hummingbird feeders during the breeding

TABLE 1. Species of North American birds, other than hummingbirds, known to feed on nectar.

	Nectar source	Locality	Reference
PICIDAE			
Golden-naped Woodpecker, *Tripsurus chrysauchen*	flowers	Costa Rica	Skutch 1969
CORVIDAE			
Scrub Jay, *Aphelocoma coerulescens*	feeders	California	this paper
White-tipped Brown Jay, *Psilorhinus mexicanus*	flowers	Honduras	Skutch 1954
		Costa Rica, Guatemala	Skutch 1960
PARIDAE			
Plain Titmouse, *Parus inornatus*	feeders	California	this paper
TROGLODYTIDAE			
Cactus Wren, *Campylorhynchus brunneicapillus*	feeders	California	this paper
MIMIDAE			
Mockingbird, *Mimus polyglottos*	flowers	California	this paper
COEREBIDAE			
Blue Honeycreeper, *Cyanerpes cyaneus*	flowers	Costa Rica	Skutch 1954
Green Honeycreeper, *Chlorophanes spiza*	flowers	Costa Rica	Skutch 1969
Bananaquit, *Coereba flaveola*	flowers	Panama, Costa Rica	Skutch 1954
Cinnamon-bellied Flower-piercer, *Diglossa baritula*	flowers	Guatemala	Skutch 1954, 1967
Slaty Flower-piercer, *Diglossa plumbea*	flowers	Costa Rica	Skutch 1967
PARULIDAE			
Audubon's Warbler, *Dendroica coronata auduboni*	feeders	Jalisco, Mexico	this paper
ICTERIDAE			
Montezuma Oropendola, *Gymnostinops montezuma*	flowers	Honduras	Skutch 1954
		Costa Rica, Guatemala	Skutch 1960
Chestnut-headed Oropendola, *Zarhyncus wagleri*	flowers	Panama	Leck 1974
Chisel-billed Cacique, *Amblycercus holosericeus*	flowers	Costa Rica	Skutch 1967
Scarlet-rumped Cacique, *Cacicus uropygialis*	flowers	Costa Rica	Skutch 1969
Melodious Blackbird, *Dives dives*	flowers	Honduras	Skutch 1954
Orchard Oriole, *Icterus spurius*	flowers	Honduras	Skutch 1954
		Panama	Leck 1974
Scott's Oriole, *I. parisorum*	feeders	Arizona	Leck 1974
		California	this paper
Hooded Oriole, *I. cucullatus*	feeders	California	Fisk 1973
		Arizona	Leck 1974
		Jalisco, Mexico	this paper
	flowers	California	this paper
Baltimore Oriole, *I. galbula galbula*	feeders	Northeastern U.S.	Peterson et al. 1963, and this paper
		Jalisco, Mexico	this paper
	flowers	Costa Rica	Skutch 1969
		Panama	Leck 1974
Bullock's Oriole, *I. galbula bullockii*	feeders	Jalisco, Mexico	this paper
Wagler's Oriole, *I. wagleri*	feeders	Jalisco, Mexico	this paper
Abeille's Oriole, *I. abeillei*	feeders	Jalisco, Mexico	this paper
Scarlet-headed Oriole, *I. pustulatus*	feeders	Jalisco, Mexico	this paper
Yellow-backed Oriole, *I. chrysater*	flowers	Panama	Leck 1974
THRAUPIDAE			
Common Bush-tanager, *Chlorospingus ophthalmicus*	flowers	Costa Rica, Guatemala	Skutch 1967
FRINGILLIDAE			
Florida Cardinal, *Cardinalis cardinalis floridanus*	flowers	Florida	Russell 1951
			Wible 1974
Black-headed Grosbeak, *Pheucticus melanocephalus*	feeders	Arizona	this paper
Varied Bunting, *Passerina versicolor*	feeders	Jalisco, Mexico	this paper
Purple Finch, *Carpodacus purpureus*	feeders	California	this paper
House Finch, *C. mexicanus*	feeders	California	Taylor 1973
			this paper
Yellow-thighed Finch, *Pselliophorus tibialis*	flowers	Costa Rica	Skutch 1967

season in the northeastern United States according to John N. Kennard (pers. comm. 1973). Somewhat more surprising visitors to Mrs. Zimmermann's feeders include wintering Audubon's Warblers (*Dendroica coronata auduboni*) and a Varied Bunting (*Passerina versicolor*). During a stay at the Santa Rita Lodge in Madera Canyon, Arizona, on May 14 and 15, 1974, Mrs. Zimmermann also watched Scott's Orioles and Black-headed Grosbeaks (*Pheucticus melanocephalus*) feeding at hummingbird feeders. Thus, through her

careful observations, Mrs. Zimmermann has added seven additional species of birds, including four orioles, to the list of exploiters of man-made nectar.

This list can be further expanded by adding several orioles and other birds which feed on nectar from flowers. Leck (1974) reported this feeding habit by the Baltimore Oriole, Orchard Oriole (*I. spurius*), Yellow-backed Oriole (*I. chrysater*), and Chestnut-headed Oropendola (*Zarhyncus wagleri*). Nectar feeding at flowers has also been reported for the Montezuma Oropendola (*Gymnostinops montezuma*) and 14 other Central American birds by Skutch (1954, 1960, 1967, 1969). The Florida Cardinal (*Cardinalis cardinalis floridanus*) occasionally exploits this food source (Russell 1951, Wible 1974). Dr. and Mrs. Raymond Ryckman (pers. comm. 1974) have also observed Hooded Orioles and Mockingbirds (*Mimus polyglottos*) feeding on the spongy, nectar-filled petals of cultivated guavas (*Feijoa sellowiana*) in Loma Linda, California.

These additions are of interest because they include principally granivorous and insectivorous birds that have not previously been considered as nectar feeders. The known nectarivorous birds of North America, exclusive of hummingbirds, are summarized in table 1. Thirty-two species representing 10 families are included in this temporary listing. The expanded list of nectar feeding orioles, now including nine species or subspecies, further substantiates the claim that "nectar feeding is more common in all orioles than has previously been recognized" (Fisk 1973). Nectar feeding appears to be even more widespread than was formerly suspected. From the list presented here, the statement by Peterson and others (1963) that more than 1600 species of birds feed on nectar should no longer be so difficult to believe, even for North American ornithologists.

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INLAND MIGRATION OF JAEGERS IN NORTHEASTERN ALASKA

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The migration route by which jaegers reach the arctic slope of northern Alaska has been stated or implied as north along the western coast and thence east or south onto the rolling tundra of the slope and into the foothills and mountains (Bee 1958, Irving 1960, Kessel and Cade 1958, Maher 1974, and Williamson et al. 1966). A major spring movement of jaegers north through the eastern Brooks Range was observed in May 1972; this observation raises questions regarding the regularity and geographic distribution of such inland migration routes.

Spring was late that year, and most of the ground on both the north and south slopes of the eastern Brooks Range was still snow-covered by 15–18 May; there were few signs of breakup on the rivers, ponds, and lakes. In 13 hr of low-level flying including both slopes of the Brooks Range, and extensive ground observations at Arctic Village, only one jaeger, probably a Long-tailed Jaeger (*Stercorarius longicaudus*), was seen between 15 and 19 May. On 20 May, Dean and Magoun established a camp just east of the Canning River near the junction of Ikiakpuk and Ikiakpaurak valleys (approximately 69°25′ N, 146°00′ W). The entire area was essentially snow-covered, and we were ahead of the arrival of passerine migrants. By 24 May much of the snow on south-facing slopes had melted and the Canning River ice was beginning to break up. No jaegers were seen 20–26 May; on 27 May a flock of several Long-tailed and five unidentified jaegers were seen (three singles, one double). From Valkenburg's arrival on 26 May until 7 June the area was never truly dark and was under almost 24-hr observation.

During the day of 28 May and during the night of 28–29 May there was a steady stream of jaegers coming north out of the mountains through the Canning River valley. The birds were flying well below the mountain tops, sometimes quite close to the ground. At the junction of the Ikiakpuk and Ikiakpauruk valleys some swung NE and followed or angled across one of these valleys without an obvious change of direction. We were unable to devote full attention to the birds and could only estimate their number. Additionally, since we were observing from a slope on one side of a broad valley, we were faced with obvious problems arising from distance, sun direction, and light intensity. Dean estimated at the time that the flight must have averaged one jaeger every 5 min for about 30 hr; the birds were flying as singles, in two's and three's, and in small groups. He identified many Long-tailed Jaegers and some Pomarine Jaegers (*S. pomarinus*). Valkenburg estimated that he saw between 20 and 30 from 08:00 and 14:00 on 28 May. From 14:00 28 May to 05:00 29 May he estimated 90 birds. He saw from 50 to 60 more between 05:00 and