

TABLE 3. Numbers of pellets per day regurgitated by Sparrow Hawks during three feeding experiments of 20 days each.

Sparrow Hawks	Experimental food and no. pellets/day												$\bar{x} \pm SD$	
	Mice				Cotton with beef heart			Birds				Σ		
	0	1	2	3	Σ	0	1	Σ	0	1	2			Σ
♀	1	18	1		20		20	20	2	18		18	58	18.7 ± 0.9
♀	2	18			18		20	20	2	18		18	56	18.7 ± 0.9
♂		14	5	1	27	3	17	17	5	14	1	16	60	20.0 ± 4.9
♂	2	18			18	2	18	18				20	56	18.7 ± 0.9
Σ					83			75				72	230	
$\bar{x} \pm SD$					20.8 ± 3.7			18.9 ± 1.3				18.0 ± 1.4		

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FIRST NESTING RECORD FOR THE FRIGATEBIRD (*FREGATA MINOR*) IN THE MAIN HAWAIIAN ISLANDS

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Moku Manu lies $\frac{3}{4}$ mile off Ulupau head on the east shore of Oahu, Hawaii. It is one of several small islets which serve as breeding grounds for Hawaiian seabirds. Entry without permit is prohibited by the Hawaii State Department of Fish and Game.

A short visit (08:00-14:00) was made to Moku Manu on 17 July 1970. One nest containing a Frigatebird (*Fregata minor*) chick was discovered near the shoreline along the south side of the island (fig. 1). No adults were observed at the nest, and we estimated the chick's age at approximately 1-1½ months. The nest was located within 15 ft of Red-footed Booby (*Sula sula*) nests containing chicks of approximately the same age. The size, condition, and location of the Frigatebird's nest indicated that it had possibly been



FIGURE 1. Frigatebird nest found on Moku Manu on 17 July 1970.

used by boobies in former years. It is also interesting to note that this nest was on the extreme periphery of the local booby colony.

Adult Frigatebirds (estimated total population, 400-500) roosted in dense groups 75-100 yards away in

an area almost devoid of booby nests. They were also found in smaller groups (10-30) elsewhere on the island. We are confident that no other Frigatebird nests were on the island at the time, as we were able to survey the entire island during the visit.

Frigatebirds were reported to roost in large numbers year around on Moku Manu as early as 1948 when they "exhibited the behavior characteristics of a resi-

dent species" (Richardson and Fisher, *Auk* 67:285-306, 1950). They suggested that all these birds were probably nonbreeding and immature individuals. The closest known nesting area, prior to this account, is Nihoa Island, which lies slightly less than 300 miles NW of Honolulu, Oahu, Hawaii.

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