perimental and control adults fed similar proportions of fish, garbage and intertidal food to their young. Although the young of experimental adults gained weight normally, the adults may have lost more weight than control adults and so lessened their own chances of survival. This possibility could not be investigated. However, Ward (1973) noted that no higher mortality occurred among adults raising more than the normal one to three chicks.

ACKNOWLEDGMENTS

We thank Ivor McMahen, Juanita Russell, and Ken Morgan for their assistance in the field. The continued support of Jamie Smith and his field crew are much appreciated. We thank the Tsawout and Tseycum Indian Bands of Saanich, British Columbia, for permission to work on Mandarte Island. Helpful comments on the manuscript were provided by George Hunt. The study was supported by the National Research Council of Canada and a President's Research Grant from Simon Fraser University.

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Accepted for publication 22 November 1978.

Condor, 82:226–227

RAPTOR HEMATOCRIT VALUES

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Avian hematology has attracted considerable study (Albritton 1952, Lucas and Jamroz 1961, Kaplan 1969, Jones and Johansen 1972, Milsom et al. 1973, Balasch et al. 1974, Carpenter 1975, Sturkie 1975, and Fallaw et al. 1976) yet very few data are available for birds of prey (Bond and Gilbert 1958, Cooper 1972, 1975, Balasch et al. 1976). Hematocrit (defined as the packed cell volume of erythrocytes in the blood expressed as a percentage of the total blood volume) has been shown to be higher in sexually mature male birds than females (Sturkie 1975, Fallaw et al. 1976), perhaps reflecting the influence of gonadal hormones (Sturkie 1975). Seasonal fluctuation also has been recorded in avian erythrocyte numbers (Sturkie 1975). While these may reflect natural fluctuations for avian species, Cooper (1975) has suggested that some reduced hematological values are associated with traumatic injury and disease and as such may be helpful in clinical diagnosis. The objective of this paper is to contribute to the data base of hematocrit values for wild raptors.

Research from 18 December 1975 through 18 December 1976 included five species of raptors: American Kestrel (*Falco sparverius*), Goshawk (*Accipiter gentilis*), Cooper's Hawk (*Accipiter cooperii*), Marsh Hawk (*Circus cyaneus*) and Red-tailed Hawk (*Buteo jamaicensis*). Birds were collected in Canyon Co., Idaho.

We used conventional trapping methods to obtain blood samples from raptors in the wild. Birds were unanesthetized but wrapped in a cloth for restraint while we took blood samples. Blood was drawn from the brachial vein in all species except the kestrel, whose smaller size necessitated sampling from the jugular vein. A 25-gauge unheparinized syringe proved to be most satisfactory for small avian veins. We drew 1 ml (kestrels) to 5 ml (occasionally from larger raptors) without observing any deleterious effects on the birds. Some of the drawn blood was transferred into two heparinized capillary tubes and microcentrifuged for five minutes at 402.5 RCF and the hematocrit recorded. The balance of the blood sample was given to the U.S. Fish and Wildlife Service for other studies. Most of the sampling was done in the field before noon, the capillary samples being stored on ice until analysis. Capillary tubes were always centrifuged within eight hours of drawing the blood. No investigation was made of the possible effects of such storage on hematocrit values.

We obtained few measurements of accipiters, Red-tailed Hawks and the Marsh Hawk and can say little about their comparative hematocrit values (Table 1). Our larger sample size for American Kestrels allows us to examine their hematocrit values by season and sex. During the fall and winter seasons there was no statistically significant difference between male and female American Kestrel hematocrits. A small sample size for spring male values prevents a valid comparison during that season. The fall 1976 mean hematocrit for male kestrels was significantly lower than that of winter 1975 males ($t = 1.843$, $P < .05$). Similarly, spring 1976 female hematocrits were significantly lower than winter 1975 female hematocrits ($t = 2.291$, $P < .05$).

Our data are significant in representing hematocrit values of birds trapped and sampled in the wild, whereas most of the values available in the literature are from captive, domestic, injured or diseased birds. Our kestrel data agree with Sturkie (1975) that hematocrit values fluctuate according to season, but our results do not support the view that hematocrit varies according to sex (Sturkie 1975, Fallaw et al. 1976). In general our raptor hematocrit values appear to be higher than most of those reported by others (Bond and Gilbert 1958, Cooper 1972, 1975, Balasch et al. 1976). This may reflect more normal values of wild birds used in our sampling, or the higher hematocrit values attributed to strong flyers (Carpenter 1975). It is probably

TABLE 1. Mean hematocrit values of raptors during 1975 and 1976.

Season	Species	Sex		
		Unknown	Male	Female
Winter (18 Dec. 1975 to 12 Feb. 1976)	American Kestrel		$\bar{x}$ = 52.7 ± 3.2 (N = 14)	$\bar{x}$ = 52.2 ± 3.0 (N = 18)
	Goshawk	$\bar{x}$ = 52.8 ± 3.2 (N = 2)		
	Cooper's Hawk	45.0 (N = 1)		
	Red-tailed Hawk	$\bar{x}$ = 48.5 ± 7.8 (N = 2)		45.0 (N = 1)
Spring (20 March to 14 April 1976)	Marsh Hawk	41.0 (N = 1)		
	American Kestrel		48.0 (N = 1)	$\bar{x}$ = 45.3 ± 4.1 (N = 3)
Fall (2 Oct. to 18 Dec. 1976)	American Kestrel		49.3 ± 3.6 (N = 6)	50.2 ± 3.5 (N = 7)

not due to smaller size (Balasch et al. 1974) since we found high values for larger raptors. Other factors such as variation in sampling methodology and geographical variation may also be influential.

We wish to thank all who assisted in this project, particularly Erwin Sonnenberg, Charles Schwartz, and Thomas R. Taylor. We also thank F. Lynn Carpenter, David Jones, Michael D. Kern, and an anonymous reviewer for their valuable comments on earlier drafts of this paper.

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Condor, 82:227–228

CHARACTERISTICS OF THE RAZOR-BILLED CURASSOW (*MITU MITU MITU*)

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In 1766, Linnaeus named the Razor-billed Curassow *Crax mitu*, based on Marcgrave's (1648) account from Pernambuco, northeastern Brazil. For the next 300 years since then, nothing more was reported about this bird. Marcgrave's specimen (not preserved) was assumed to have come from Amazonia, where lives the relatively common *Mitu mitu tuberosa*. This species and its allies were put in a new genus, *Mitu*, by Lesson (1831), the name generally used until Delacour and Amadon (1973) merged *Mitu* into *Crax*.

In 1952, Pinto reported from Alagoas a single female, the first northeastern specimen to reach a museum. The locality was in extreme eastern Brazil, well separated from the range of *tuberosa*. Delacour and Amadon (1973; contra Vaurie 1967) agreed with Pinto that the specimen (in the Museu de Zoologia, Universidade de São Paulo) represented a different subspecies, *M. m. mitu*.

In February 1977, I had the privilege to study a female of this subspecies which was living in the spacious aviary of Pedro Nardelli, an outstanding aviculturist in Rio de Janeiro. It had been found in Alagoas and kept in a box for several years, even once laying an egg, before it was acquired by Nardelli. The bird adapted itself well to the aviary and its plumage was