During the 1971 expedition a ground and air reconnaissance was made of the hitherto unvisited McDonald Islands, 38 km west of Heard Island (Budd, Polar Record, 16: 64, 1972). No King Penguins were seen, which is in keeping with earlier suggestions that the most likely source of those at Heard Island is Kerguelen (49° S, 69° E), 460 km to the northwest.

It is a pleasure to acknowledge the generous help given by Richard Cohen and Ben Roth in correspondence, and the hospitality and support of Terres Australes et Antarctiques Françaises. The observations were made while I was temporarily attached to the Antarctic Division, Department of Supply, Melbourne, which provided supporting funds.—G. M. BUDD, *School of Public Health and Tropical Medicine, University of Sydney, Sydney, New South Wales 2006.* Accepted 11 Jan. 72.

The California Condor in the Pacific Northwest.—The California Condor (*Gymnogyps californianus*), once found along the Pacific Coast from Baja California to British Columbia, had become very rare north of California by 1850. Koford (1953), summarizing information available on the species in the Pacific Northwest, tentatively concluded that birds seen in that area were wanderers from California, perhaps forced north in some years by food shortages. As support for his theory he noted that there were no records of fossil condors in this northern region, known occurrences there were all in winter, and only a few individuals seemed to be present at any one time.

Recently information has come to light that suggests the Pacific Northwest condors were permanent residents with a long history there. An Indian midden on the Columbia River near The Dalles, Oregon, has yielded a considerable number of California Condor bones, dating back thousands of years (Miller, 1957). A more recent, but still precaucasian condor bone was found in another midden in southwestern Oregon (Miller, 1942). These finds indicate the condors are not recent invaders from California.

Most records of condors on the lower Columbia River are in the period October to May, but condors were present at other times of year. A specimen taken in the Columbia River area in 1825 was probably collected in late summer (Scouler, 1905). Elsewhere condors were observed in the Umpqua River area of Oregon from March through October (Finley, 1908; Douglas, 1914; Peale, 1957), and in southern British Columbia in September and November (Macoun and Macoun, 1909; Tolmie, 1963). Information is biased by the small number of reports, and probably by seasonal travel patterns of observers, but it indicates both yearlong residency in the Pacific Northwest and a fairly definite movement to the Columbia in fall and away in spring. No condor nests were ever found in Oregon, Washington or British Columbia, but this may be because few people visited the more rugged portions of this region prior to the species' disappearance.

Nonbreeding condors now wander considerable distances, but have a tendency to move toward the breeding grounds in winter (Wilbur, MS). Records from the Pacific Northwest indicate condors may have been as plentiful in winter as at any time of year. Also, seasonal movements in recent years have taken condors only 150–200 miles from nesting areas. Condors were nesting farther north in the 1800s than today, but it would still have been a 400–600 mile journey from central California breeding areas to Oregon, Washington, or British Columbia.

Scarcity of food might have furnished incentive for long distance flights, but all indications are that food was much more abundant year-round in California than it would have been in the Pacific Northwest at any season. Pronghorn, elk, and

deer were plentiful in California until after 1840 (Burcham, 1957). Addition of the first cattle, sheep, and horses around 1820 swelled the potential food supply (Koford, 1953; McCullough, 1969). Although there are no records of condors feeding on salmon in California, sizeable salmon runs continued in northern and central California streams until at least 1850 (Skinner, 1962). The seacoast was relatively unsettled and probably offered considerable food at times. Large reductions in native game or livestock did not occur in California until after 1840. By that time condors were already rare in the Pacific Northwest.

We see evidence today of discrete subpopulations of California Condors that each have specific nesting and foraging areas and seldom mix with members of other groups (Wilbur, MS). The situation in Monterey County, California, supports this theory. At one time it was a major condor use area (Koford, 1953), but the breeding population was apparently exterminated by egg and skin collectors. Although portions of the county still appear to be good condor habitat and condors are breeding a short distance to the southeast, no known nesting has occurred since about 1902 and condors are seldom reported there in any season. The situation in San Diego and Orange counties in California is similar. The birds in the Pacific Northwest may also have been members of an isolated population that suffered from human exploitation. Such exploitation occurred between 1805 and 1850, during which time at least 13 condors were killed (Douglas, 1828; Fleming, 1924; Putnam, 1928; Koford, 1953; Burroughs, 1961).

Condors are hampered by an extremely low reproductive rate, laying only one egg per clutch, not always laying in consecutive years, and not reaching breeding capability until at least 6 years of age. Because it has a very low natural mortality rate and a long lifespan, the condor has been able to survive with low productivity. However recovery from any population reduction is likely to be very slow and difficult. If the Pacific Northwest population was a discrete one of only two or three dozen individuals (Koford, 1953), the known mortality in the early 1800s would have been enough to jeopardize it seriously. If, as seems likely, more were killed than are recorded in the literature, gunfire alone could have reduced the population to a level from which it could not recover. A very few old birds could have survived in the area until the early 1900s.

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Morphology and ecology of the southern African whistling ducks (*Dendrocygna*).—The model and analyses Rylander and Bolen (1970) made to demonstrate morphological and ecological differences between the North American whistling ducks *Dendrocygna bicolor* and *D. autumnalis,* prompted me to examine similar adaptations in the southern African whistling ducks, the Fulvous *D. bicolor* and White-faced *D. viduata.* Some morphological differences, especially relative foot size, are noted between the two species, and supplementary data on the birds' breeding ecology are presented.

Table 1 summarizes standard linear dimensions for *bicolor* and *viduata* taken in southern Africa. Because large series of measurements are not available, and in order to keep to a minimum potential errors resulting from workers using different measuring techniques, I have tabulated only data from museum specimens measured by P. A. Clancey of the Durban Museum, South Africa. Although the samples are small, *bicolor* is manifestly the smaller species in all linear dimensions except in length of middle toe. Published data on weights of the two species are too few to permit a meaningful comparison.

Comparing proportions within the linear dimensions of each species and the relative differences in size between the species, Table 2 shows that the ratios are similar in all cases except those involving toe length, and that *bicolor* averages slightly more than 90 percent of the size of *viduata,* again except for the middle toe. Thus *bicolor* has a relatively larger foot than *viduata.* These results agree very

TABLE 1

MEAN DIMENSIONS FOR ADULT FULVOUS AND WHITE-FACED TREE DUCKS[1]

Species	Culmen	Wing	Tarsus	Middle toe (excluding claw)
D. bicolor	46.2 (44–48)	213.8 (203–225)	51.2 (46–53)	65.5 (63–67)
D. viduata	50.3 (46–53)	226.1 (219–240)	53.0 (50–56)	57.1 (54–61)

[1] Measurements in mm. All measurements from Clancey (1967; in litt., 1970). Ranges shown in parentheses. Samples comprised 5 males and 5 females for each species, except middle toe measurements, which derive from 5 female and 2 male *bicolor* and 7 male and 3 female *viduata.*