

servation.

It would be most appreciated if any individual or institution possessing adult specimens of known sex of any species of starling would make note of the color of the gape and forward this information to the author care of Bird Department, Fort Worth Zoological Park, 1989 Colonial Parkway, Fort Worth, TX 76110.

Photographs of identified birds would also be most welcome as well as information as to the age the adult gape coloration is attained.

Dr. Lester L. Short gained international attention in 1986 for his confirmation of the continued existence of the Ivory-billed Woodpecker in Cuba. Dr. Short is the acknowledged authority on woodpeckers, honeyguides, barbets and toucans, the families that comprise the higher Piciformes. His monograph of the World's Woodpeckers, published over a decade ago, remains the definitive work on these birds and he is presently co-authoring, with his wife (Bioacoustician and Senior Research Fellow in Ornithology at the National Museum of Kenya) Jennifer Horne, another, covering the latter three families, the first to do so in the twentieth century. He and Horne are thus frequently in the field, especially in East Africa, conducting behavioral and ecological research. They are also involved in avian conservation there and elsewhere (including Peru). They have not ignored captive resources. In 1992, they spent several days observing and recording the vocalizations of the world's largest collection of captive toucans at Jerry Jennings's Emerald Forest Bird Gardens in California.

Somehow, Dr. Short has also found time to write his delightful *The Lives of Birds*, published by Henry Holt in 1993, the first of a series of books on animal behavior, prepared in conjunction with the American Museum of Natural History.

Dr. Short has a long association with the American Museum, joining the Department of Ornithology in 1966. His responsibilities have included chairing the Department before assuming the Lamont Curatorship, an endowed research position. The AMNH Ornithology Department is, of course, one of the leading centers for avian research and houses the most extensive collection of preserved bird specimens in the world. ●

## The Size of Softbills by Weight

by Les Gibson  
Portland, Oregon

Sizes of birds are invariably given by length because this has been the only practical way. While it gives some idea of size it runs up against the problem of bulky feathers and, in particular, tail length. Also, the length can be measured in several different ways (from top of head, tip of beak, etc.). For example, the size of the same small bird (a Solitaire) varied from 6.5"/16.5 cm to 8.75"/22 cm in several different field guides.

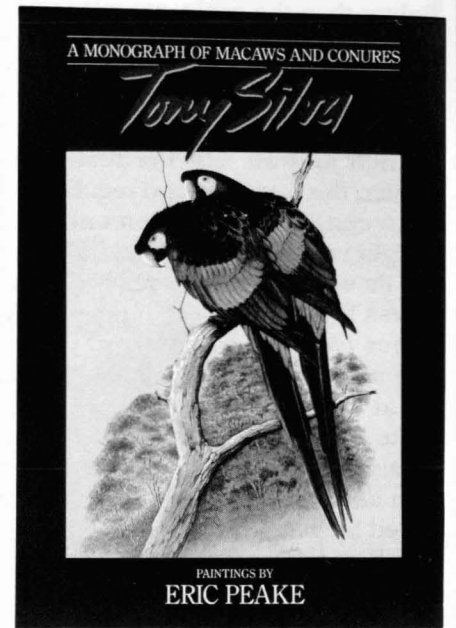
A more accurate and useful method is weight. It should not be an overwhelming task to eventually compile a weight list of the relatively few kinds of birds kept in captivity. Of course, there is variation to be found. Some factors to be considered are:

- Breeding
  - Indoors or out: cage or aviary
- Migrating
- Molting
- Sex
  - Subspecies/geographic origin
  - Season/climate
- Well fed/starving: established/newly imported (these categories often coincide).

Birds are almost always heavier when kept out of doors, especially in winter (in northern climes, anyway), as they are in the breeding season or at migrating time, even if they are not going anywhere. A small bird can easily increase in weight by five percent after eating, and a hungry, newly imported Minivet ate 32 percent of its weight in mealworms per day, for several weeks.

Birds of prey, with their feast-or-famine eating pattern, normally experience a much wider fluctuation than small passerines. A Screech Owl (*Otus asia*) that was found in midwinter, frozen and starving, promptly gained 44 percent or, if you like, started at 69.5 percent of its usual weight. This was 30.5 percent down and almost at the fatal limit for Shammas (see below). The anomaly lies in whether you use the higher or lower weight to calculate the percentage.

Even larger gains are common in fish-eaters. An immature Bald Eagle regularly increased by 10 percent each



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meal (that was all it was given!). A Great Blue Heron (*Ardea herodias*), lighter than the eagle, ate even more. Thin as a coathanger, it was found frozen to a branch beside a dead companion. An enterprising Humane Society officer brought it to me, branch and all! For the rest of the winter, this four foot bird regularly ate between 20 and 25 percent of its weight in fish per meal and still found the time to stab at my eyes every time it was fed. An injured, hungry Kingfisher (*Megaceryle alcyon*) gulped down 40 percent of its weight in fish, all at once! So for consistency, all these birds should be weighed before meals.

In a number of cases, birds can be sexed by weight (see table) and these numbers will grow with the weighing of more species.

Also, weight is a useful guide in grouping birds to be housed together. This is a notoriously difficult problem for the average softbill-keeper with limited space. It will be found that birds can be kept together with less risk if they are the same weight than if they look the same apparent size.

The tables can be used as a health guide by comparing the weight of a bird to the expected average and for many years I have used this as an aid to prognosis. Often, weight loss — the traditional “going light” — is the sole symptom of impending trouble. Before a sick bird dies, it invariably loses weight and this is especially rapid in the final few days. For example, on the day it died, a softbill chick lost 13 percent of its previous day's weight. Birds that are below a certain minimum weight when obtained cannot be expected to survive. Shamas, which averaged 31g — and showed the greatest variation of all the birds in this study — did not survive if they were one third or more below normal, i.e. under 20.5g for males or 19g for females.

After taking the above into account, birds in this study — all softbills — have been quite consistent and random weighings have been remarkably close.

Abbreviations used in the table:

b = breeding condition

i = indoors

m = molting

o = outdoors

Weights are of normal, healthy adults, unless noted otherwise. ●

BIRD	MALE	FEMALE	?	COMMENTS
<i>Chloropsis aurifrons</i> (Gold-fronted)	35.8 (o) 36.4 (i) 37 (o)	31.5 (i) 34.25 (o)		
<i>C. hardwicki</i> (Orange-bellied)	38.4 (o,m)	33.5 (o,b) 35		
<i>C. cochinsinensis</i> (Blue-winged)	26.1 (i)			
<i>Colius macrourus</i> (Blue-naped Mousebird)	50.2 (o) 49.1 (o)	51 (o) 52.8 (o)		Sexable
<i>Copsychus malabaricus</i> (White-rumped Shama)	26.5 (i) 29 (i) 30 (i) 32.1 (i) 32.4 (i)	27.5 (o) 29 (i) 29.5 (o,m)		“Small-beaked” race Male aged 10
<i>C. saularis</i> (Magpie Robin)	31 (o) 35.5 (i)	33.5		Same weight 6 months later Males different races
<i>Cyanerpes cyaneus</i> (Honeycreeper)	15.25 (i) 14 (i)			
<i>Cyanocitta stelleri</i> (Steller's Jay)		145 (o)		
<i>Cyanocorax yncas</i> (Mexican Green Jay)	79.5 (o,b)	66 (o)		Hen in doubtful health
<i>Cyanoptila cyane</i> (Blue-White Flycatcher)	26.5 (i) 35	26.5 (i)		Newly imported migration fat
<i>Erithacus cyane</i> (Siberian Blue Robin)	16.6 (i) 17 (i)	15.3 (i) 17.4 (i)		
<i>Euneornis campestris</i> (Orangequit)		28 (o)		
<i>Garrulax albogularis</i> (White-throated)			98.5	Age 15, died soon
<i>G. canorum</i> (Hua Mei, etc.)	66 (i,m)	60 (i,m)		
<i>G. jardinei</i> (Arrow Babbler)	85 (o)	86.5 (o,b) 85.25 (o)		
<i>G. leucolophus</i> (White-crested)	108 (i) 99 (i)	113 (i)		Sexable
<i>G. mitratus</i> (Chestnut-capped)	59 (o,b)			
<i>Irena puella</i> (Fairy Bluebird)	58 (i)	54 (i)		
<i>Laterallus leucopyrrhus</i> (Red and White Rail)	37.5 (i) 40 (i)	43.2 (i)		Sexable
<i>Leiothrix argentea</i> (Silver-eared Mesia)		27.75 (o)		Age 1 month
<i>L. lutea</i> (Pekin Robin)	24.5 (i) 26 (o)	22.2 (i)		Same male later
<i>Myadestes obscurus</i> (Brown-backed Solitaire)	38.4 (o)			Age 3 months
<i>Pericrocotus flammeus</i> (Scarlet Minivet)	30.6 (i,m)	29.5 (i,m) 32.5 (i)		Newly imported Six months later
<i>Pycnonotus sinensis</i> (White-crowned Bulbul)			31.75 (o) 31.75 (o)	
<i>Ramphocelus carbo</i> (Maroon Tanager, etc.)	33 (o)	32.5 (o)		
<i>Spreo superbus</i> (Superb Starling)	67.5 (i)	69 (i) 69.5 (i)		Lung mites Six months later
<i>Thamnolaea coronata</i> (White-crowned Chat)	33 (o) 39 (i)			Small race
<i>Turdus merula</i> (European Blackbird)		86.5 (o)		Mediterranean race
<i>Yuhina nigrimentum</i> (Black-chinned flowerpecker)			8.2 (i)	
<i>Zosterops palpebrosa</i> (Indian White-eye)		8.25 (i,b)		
<i>Z. erythropleura</i> (Chestnut-flanked)			12.25 (i)	

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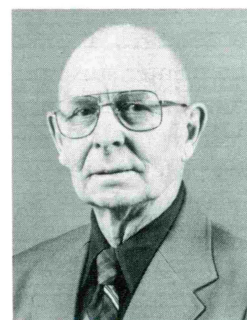


detail *"Hyacinth Macaws"*

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