

THE WINGSPAN OF PARROTS

Scott McDonald, DVM and Karrie Noterman Jan 2016

I took this picture last year while hiking at Torres del Paine National Park in southern Chile. It's an Andean Condor. This bird has the 4th longest wingspan of all birds...of which there are over 10,000 species. Its wingspan approaches 11 feet, or 3.4 meters (340 cm). Do you know what species has the longest wingspan?



I was approached earlier this year by Karrie Noterman, the owner of Natural Inspirations Parrot Cages. She wanted to see if I would be interested in collecting data on the wingspan of as many of the commonly kept psittacine birds as possible. The intent was to publish this information, which would help bird owners choose an appropriate sized cage or enclosure for their pet bird.

I have the advantage that all of my examinations are preformed while the bird is sedated with isoflurane gas anesthesia. In addition I see many, many birds. Over the course of 4 months, I measured the wingspan of 456 birds representing 94 species. Ten individuals were the maximum number of measurements for any one type of bird. In many instances this number is less because of the rarity of the species.



All measurements were taken on anesthetized birds. The wings of each bird were fully extended and the reading was taken from the tip of the longest primary flight feather on each wing. Only birds with intact primary flights were included in this study. Accuracy is within $\frac{1}{2}$ inch total span.

We often hear or read that the minimum size (horizontal length) of a cage should be $1\frac{1}{2}$ - 2 times the wingspan of the parrot housed there (See last page for references). This is important because a bird should be able to totally extend its wings (in the cage) and flap them vigorously for exercise. Remember, however, that the more perches, toys, food stations, etc. placed in the cage, the less space is available for adequate wing exercise.

Larger cages and enclosures are better than small ones. For birds that are out of the cage most of the day, $1\frac{1}{2}$ times the parrot's full adult wingspan is the minimum enclosure size. For those birds that spend considerable time in their cages, 2 times the parrot's full adult wingspan is recommended. Ideally pet birds should be encouraged to spend time out of their cage, not only for exercise but

for social interaction with humans and other birds. However, spending significant amounts of time outside the cage does not justify smaller housing.

“For whatever length of time the bird is caged, the animal should be allowed a certain freedom of movement within its enclosure.” – *Karrie Noterman*

It is unfortunate, but most people house their birds in cages that are too small. Some people simply can't afford a large cage or they don't have enough room. Others may rationalize that a small cage is a place of refuge and safety for their bird.

In the wild, parrots find security from threatening situations by flying away or moving to the top of nearby trees. In captivity, birds will also try to move up and away when scared. Unrestrained pets will try to get to one's shoulder or head or fly up on curtain rods, ceiling beams, etc. Caged birds will move to the furthest part of the enclosure and/or fly panicky back and forth looking for a way of escape. Small cages do not provide security. Studies have shown that when presented with larger enclosures, even though the birds may be fearful at first, they eventually acclimate and prefer the addition of added space.



Cockatiels in the Australian outback seeking refuge at the top of a tree

Regrettably, many birds live for years in the deprived environment of a small cage. They may become fearful and phobic; some may not even venture out of their cage, even if it's left open. It can be a sad, depressing life for these birds and we wonder why they develop abnormal behaviors such as feather picking, screaming, and biting.

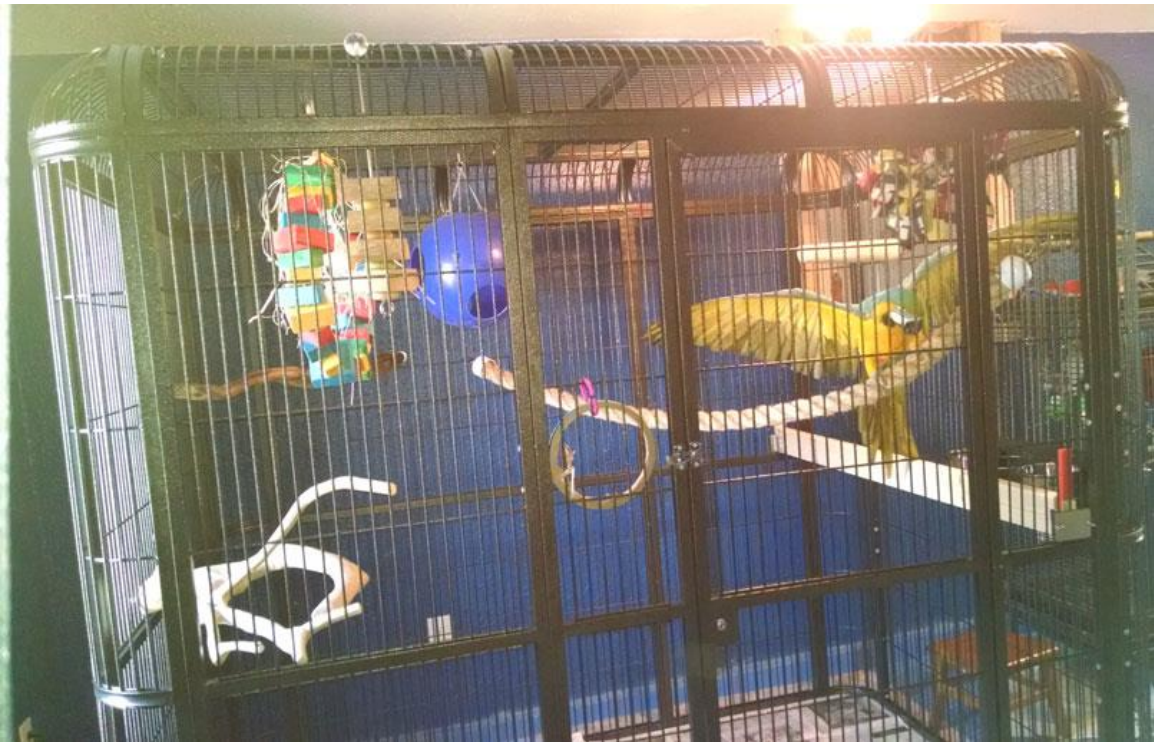
“In my opinion it is cruel and inhumane to keep birds, as highly intelligent and energetic as parrots, in cages that are so small that they cannot fully spread their wings”. – Scott McDonald, DVM

So what is the wingspan of parrots? They are listed below in the designated categories. Wingspan values listed are an average of all the birds sampled for each species. In general, the more a bird weighs, the longer the wingspan

51 inches Longest individual wingspan (Hyacinth Macaw)

9.50 inches Shortest individual wingspan (Parrotlet)

The large macaws have the largest wingspan of all parrots. Interestingly, all the largest species have about the same wingspan (within 3 inches). A few hybrids are included.



Blue and Gold macaw enjoying the wing room in a Centurion 86" wide x 62" deep x 80" high Walk in Aviary.

Note: The enclosure sizes listed below for each species are readily available cage sizes based on 1.5 and 2 times the parrot's full adult wingspan dimensions. If you think the cage sizes shown are too small, great, so do we. Provide them larger ones! The cage sizes for the small parrots seem very small. Remember that the ratio of space given to a budgie for 1.5 times his wingspan is the same amount of space provided to a macaw in an enclosure 1.5 times their wingspan, even though the macaw cage seems enormous and the budgie cage seems tiny. The goal of this paper is to give parrot owners accurate data and appropriate perspective!

Species: MACAWS () Number of birds sampled	Wingspan of parrot in inches	1.5 x the wingspan In inches	2 x the wingspan In inches (in feet)	MINIMUM enclosure examples from readily available standard cage sizes of "one wingspan" deep by "one and a half to two wingspans wide / long."
Hyacinth (10)	49"	73.5"	98" (8'2")	86x62, 110x62
Harlequin (2)	49"	73.5"	98" (8'2")	86x62, 110x62
Green Wing (10)	47"	70.5"	94" (7'8")	86x62, 110x62
Catalina (4)	47"	70.5"	94" (7'8")	86x62, 110x62
Ruby (3)	47"	70.5"	94" (7'8")	86x62, 110x62
Buffon (2)	46"	69"	92" (7'6")	86x62, 110x62
Blue and Gold (10)	46"	69"	92" (7'6")	86x62, 110x62
Scarlet (8)	46"	69"	92" (7'6")	86x62, 110x62
Military (8)	42"	63"	84" (7'0")	62x62, 86x62, 110x62
Caninde (5)	40.5"	60"	81" (6'9")	80x40, 62x62, 86x62
Red Front (10)	35.5"	53"	71" (5'9")	64x32, 80x40, 62x62, 86x62
Severe (10)	29.5"	44"	59" (4'11")	48x36, 64x32, 80x40, 62x62
Illiger (3)	26"	39"	52" (4'4")	40x30, 48x36, 64x32 x 80x40
Yellow Collared (6)	25"	37.5"	50" (4'2")	40x30, 48x36, 64x32 x 80x40
Hahn's (7)	20"	30"	40" (3'4")	36x24, 40x30, 48x36, 32x64

Species: AUSTRALIAN PARROTS () Number of birds sampled	Wingspan of parrot in inches	1.5 x the wingspan In inches	2 x the wingspan In inches (in feet)	MINIMUM enclosure examples from readily available standard cage sizes of "one wingspan" deep by "one and a half to two wingspans wide / long."
Princess of Wales (2)	19.5"	29"	39" (3'3")	32x21, 32x23, 35x28, 48x30
Cockatiel (8)	19.5"	29"	39" (3'3")	32x21, 32x23, 35x28, 48x30
Red rumped parakeet (2)	14.5"	21"	29" (2'5")	26x20, 24x22, 32x21, 35x28
Bourke Parakeet (10)	13"	20"	26" (2'2")	20x20, 24x24, 32x21, 35x28
Scarlet chested Parakeet (5)	12.5"	19"	25" (2'1")	20x20, 32x21, 20x26, 35x28
Budgerigar (6)	11.5"	18"	23" (1'11")	18x18, 20x20, 32x21, 35x28

Species: COCKATOOS () Number of birds sampled	Wingspan of parrot in inches	1.5 x the wingspan In inches	2 x the wingspan In inches (in feet)	MINIMUM enclosure examples from readily available standard cage sizes of "one wingspan" deep by "one and a half to two wingspans wide / long."
Red Tailed Black (2)	42.5"	63"	85" (7'1")	62x62, 86x62, 110x62
Palm Cockatoo (5)	40"	60"	80" ('6"8)	80x40, 62x62, 86x62, 110x62
Moluccan (9)	39"	59"	78" ('6"6)	80x40, 62x62, 86x62, 110x62
Triton (2)	38.5"	58"	77" ('6"5)	80x40, 62x62, 86x62, 110x62
Umbrella (8)	37.5"	56"	75" ('6"3)	80x40, 62x62, 86x62, 110x62
Medium Sulphur (5)	35"	53"	70" ('5"10)	80x40, 62x62, 86x62, 110x62
Major Mitchell (4)	33"	50"	66" ('5"6)	64x32, 80x40, 62x62, 86x62
Rose Breasted (10)	31"	47"	62" ('5"2)	48x36, 64x32, 80x40, 62x62
Citron (2)	30"	45"	60" ('5"0)	48x36, 64x32, 80x40, 62x62
Lesser Sulphur (2)	28"	42"	56" ('4"8)	48x36, 64x32, 80x40, 62x62
Goffins (7)	26.5"	40"	53" ('4"5)	40x30, 48x36, 64x32, 80x40



Umbrella Cockatoo enjoying a Centurion 110" long x 62" deep x 80" tall walk in aviary

Species: S.AMERICA PARROTS () Number of birds sampled	Wingspan of parrot in inches	1.5 x the wingspan In inches	2 x the wingspan In inches (in feet)	MINIMUM enclosure examples from readily available standard cage sizes of "one wingspan" deep by "one and a half to two wingspans wide / long."
Hawk Headed (4)	24"	36"	48" (4'0")	36x24, 40x30, 48x36, 64x32
White Bellied (4)	18.5"	28"	37" (3'1")	32x21, 32x23, 35x28, 48x30
Black Headed (5)	18"	27"	36" (3'0")	32x21, 32x23, 35x28, 48x30
Green Quaker (9)	17.5"	26"	35" (2'11")	32x23, 35x28, 30x40, 32x64
Blue Quaker (5)	17.5"	26"	35" (2'11")	32x23, 35x28, 30x40, 32x64
Half Moon (2)	16"	24"	32" (2'8")	26x20, 32x21, 32x23, 35x28
Canary Winged (2)	14.5"	22"	29" (2'5")	24x22, 32x21, 32x23, 35x28
Lineolated (7)	12"	18"	24" (2'0")	18x18, 20x24, 32x21, 35x28
Parrotlet (5)	10"	15"	20" (1'8")	18x18, 20x24, 32x21, 35x28

Species: AFRICAN () Number of birds sampled	Wingspan of parrot in inches	1.5 x the wingspan In inches	2 x the wingspan In inches (in feet)	MINIMUM enclosure examples from readily available standard cage sizes of "one wingspan" deep by "one and a half to two wingspans wide / long."
Greater Vasa Parrot (1)	34"	51"	68" (5'8")	64x32, 80x40, 62x62, 86x62
African Grey (10)	28.5"	43"	57" (4'9")	48x36, 64x32, 80x40, 62x62
Timneh Grey (10)	25.5"	38"	51" (4'3")	40x30, 48x30, 48x36, 64x32
Cape Parrot (4)	25"	38"	50" (4'2")	40x30, 48x30, 48x36, 64x32
Jardine Parrot (3)	23.5"	35"	47" (3'11")	36x24, 35x28, 36x28, 48x30
Senegal Parrot (7)	19"	29"	38" (3'2")	32x21, 32x23, 35x28, 48x30
Red Bellied Parrot (5)	18.5"	28"	37" (3'1")	32x21, 32x23, 35x28, 48x30
Meyers Parrot (8)	18"	27"	36" (3'0")	32x21, 32x23, 35x28, 48x30
Peach face lovebird (10)	12"	18"	24" (2'0")	18x18, 22x24, 32x21, 28x35
Fischers Lovebird (5)	11.5"	18"	23" (1'11")	18x18, 22x24, 32x21, 28x35
Black Masked Lovebird(3)	11.5"	18"	23" (1'11")	18x18, 22x24, 32x21, 28x35

Species: AMAZONS () Number of birds sampled	Wingspan of parrot in inches	1.5 x the wingspan In inches	2 x the wingspan In inches (in feet)	MINIMUM enclosure examples from readily available standard cage sizes of "one wingspan" deep by "one and a half to two wingspans wide / long."
Mealy (2)	32"	48"	64" (5'4")	48x36, 64x32, 80x40, 62x62
Yellow Naped (10)	28.5"	43"	57" (4'9")	48x36, 64x32, 80x40, 62x62
Double Yellow (10)	28.5"	43"	57" (4'9")	48x36, 64x32, 80x40, 62x62
Blue Fronted (10)	28"	42"	56" (4'8")	48x36, 64x32, 80x40, 62x62
Bodini Festive (1)	27.5"	41"	55" (4'7")	48x36, 64x32, 80x40, 62x62
Red Lored (7)	27"	40.5"	54" (4'6")	48x36, 64x32, 80x40, 62x62
Orange Winged (8)	26"	39"	52" (4'4")	40x30, 48x36, 64x32, 80x40
Panama (2)	26"	39"	52" (4'4")	40x30, 48x36, 64x32, 80x40
Red Headed (2)	26"	39"	52" (4'4")	40x30, 48x36, 64x32, 80x40
Yellow Crowned (1)	25.5"	38"	51" (4'3")	40x30, 48x36, 64x32, 80x40
Lilac Crowned (4)	25"	37.5"	50" (4'2")	40x30, 48x36, 64x32, 80x40
Tucaman Amazon (2)	24.5"	37"	49" (4'1")	40x30, 48x36, 64x32, 80x40
Cuban (1)	23"	34.5"	46" (3'10")	36x24, 36x28, 40x30, 48x36
White Fronted (4)	22"	33"	44" (3'8")	36x24, 36x28, 40x30, 48x36



Double Yellow Headed Amazon in a 64"x 32"

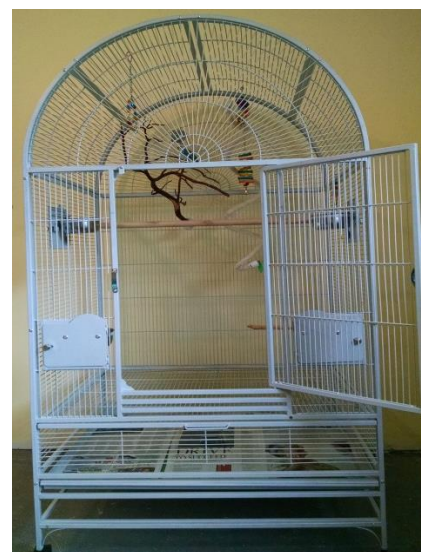


Yellow Collared Macaw in an 80" x 40"

Species: CONURES () Number of birds sampled	Wingspan of parrot in inches	1.5 x the wingspan In inches	2 x the wingspan In inches (in feet)	MINIMUM enclosure examples from readily available standard cage sizes of "one wingspan" deep by "one and a half to two wingspans wide / long."
Patagonian (1)	27"	40.5"	54" (4'6")	40x30, 48x36, 64x32, 80x40
Mitred (2)	23.5"	36"	47" (3'11")	36x24, 40x30, 36x28, 48x30
Golden (4)	23"	34"	46" (3'10")	36x24, 35x28, 36x28, 48x30
Blue Crowned (7)	22"	33"	44" (3'8")	36x24, 35x28, 36x28, 48x30
Nanday (6)	21.5"	32"	43" (3'7")	32x23, 36x24, 35x28, 48x30
White eyed (2)	21.5"	32"	43" (3'7")	32x23, 36x24, 35x28, 48x30
Cherry Headed (2)	20"	30"	40" (3'4")	32x21, 35x28, 36x24, 48x30
Jenday (2)	19.5"	29"	39" (3'3")	32x21, 35x28, 36x24, 48x30
Gold capped (3)	19"	28"	38" (3'2")	32x21, 35x28, 36x24, 48x30
Sun Conure (10)	18"	27"	36" (3'0")	32x21, 35x28, 36x24, 48x30
Peach Fronted (1)	18"	27"	36" (3'0")	32x21, 35x28, 36x24, 48x30
Dusky (2)	17.5"	26"	35" (2'1")	26x20, 32x21, 35x28, 48x30
Brown Throated (1)	16"	24"	32" (3'6")	24x24, 26x20, 32x21, 35x28
Maroon Bellied (1)	15.5"	23"	31" (3'5")	24x24, 26x20, 32x21, 35x28
Green Cheek (10)	15.5"	23"	31" (3'5")	24x24, 26x20, 32x21, 35x28
Black Capped (3)	15"	22"	30" (2'6")	24x24, 26x20, 32x21, 35x28
Rosifron's (1)	14.5"	22"	29" (2'5")	24x24, 26x20, 32x21, 35x28
Painted (3)	14.5"	22"	29" (2'5")	24x24, 26x20, 32x21, 35x28



Golden Conure (left) and two budgerigars (right) enjoying their Centurion 35" wide x 28" deep enclosures with ½" bar spacing.



Species: PIONUS () Number of birds sampled	Wingspan of parrot in inches	1.5 x the wingspan In inches	2 x the wingspan In inches (in feet)	MINIMUM enclosure examples from readily available standard cage sizes of "one wingspan" deep by "one and a half to two wingspans wide / long."
Maximillion (3)	23"	35"	46" (3'10")	36x24, 35x28, 40x30, 48x30
Blue Headed (2)	22"	33"	44" (3'8")	36x24, 35x28, 40x30, 48x30
White Capped (4)	21.5"	32"	43" (3'7")	36x24, 35x28, 40x30, 48x30
Dusky (1)	20.5"	31"	41" (3'5")	32x23, 35x24, 35x28, 48x30

Species: ASIATIC PARROTS () Number of birds sampled	Wingspan of parrot in inches	1.5 x the wingspan In inches	2 x the wingspan In inches (in feet)	MINIMUM enclosure examples from readily available standard cage sizes of "one wingspan" deep by "one and a half to two wingspans wide / long."
Great Billed Parrot (3)	28"	42"	56" (4'8")	48x36, 32x64, 40x80, 62x62
Derbyan Parakeet (1)	26"	39"	52" (4'4")	40x30, 48x36, 64x32, 80x40
Alexandrian Parakeet (2)	25"	38"	50" (4'2")	40x30, 48x36, 64x32, 80x40
Ringneck Parakeet (5)	19"	29"	38" (3'2")	32x21, 32x23, 35x28, 4x30
Moustached Parakeet (2)	18.5"	28"	37" (3'1")	32x21, 32x23, 35x28, 48x30
Plum Headed Parakeet (2)	16"	24"	32" (2'8")	26x20, 32x21, 32x23, 35x28

So, which species have the longest wingspan? These are the top 4.

Wandering Albatross	12.0 feet	360 cm	3.6 meters
Great White Pelican	11.8 feet	360 cm	3.6 meters
Marabou Stork	11.0 feet	340 cm	3.4 meters
Andean Condor	11.0 feet	340 cm	3.4 meters

Cage Size Requirements:

The following cage size requirements were directly quoted from public websites as of Jan 2016. These are the recommendations of the largest pet stores, rescue organizations, veterinary colleges, avian authorities, and popular websites in the country. The vote is in – 1½ to 2x's is the minimum size enclosure required for your pet bird, with many recommending 3 or 4 times their wingspan with room for flight.

Purdue University, College of Veterinary Medicine:

"When purchasing a bird, consider its wingspan; the cage you house the bird in should be at least twice the bird's wingspan in width, length, and depth."

avianwelfare.org:

"Cages for singly-housed larger birds should be at least one and a half times the birds' natural wing span in all directions. Ideally all birds should have cages/aviaries large enough to accommodate flight."

Animal World:

"The ideal size of any bird cage should be equal to at least 3 flight wingspans of the bird."

Natural Inspirations Parrot Cages:

"Birds that spend any significant amount of time in their enclosures, we absolutely recommend twice your parrots adult wingspan. Those that use their cages for sleeping only or are out the vast majority of every day, a minimum cage size of 1.5 times the length of their wingspan can be acceptable. Spending significant amounts of time outside the cage does not justify smaller than wingspan housing. For whatever length of time a parrot is caged, the animal should be allowed a certain freedom of movement within its enclosure."

The Gabriel Foundation:

"Minimum cage sizes: Parrot species need a minimum of 2-3 x the wingspan in width and depth"

Drs. Foster and Smith:

"For larger birds, we recommend at least 1-1/2 times your bird's adult wingspan in width, depth, and height. For smaller birds, a flight cage."

Petco:

"A cage at least twice the bird's wingspan and twice the bird's height from top of head to tip of tail with metal bars spaced close enough to prevent injury makes a good home for your small hookbill; as with all animals, it is best to provide the largest habitat possible; a flight cage is strongly recommended."