

The Black-necked Swan — from the Pampas and Places of Penguins

(*Cygnus melanocoryphus*)

Part II

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When I arrived in Fort Worth in early December, 1991, the female of the 1985 pair was displaying an interest in the pile of hay placed by the side of their pool, and on December 17, laid her first egg. The second was noted December 21, and the third the day after. On Christmas Eve, Keeper I, Lisa Weedn, discovered egg number four, and the fifth was found the day after Christmas. Lisa began to have some concern by the 28th, when the 6th egg was discovered, and was, in fact, relieved when nothing followed the seventh egg laid December 30, 1991. Our Keeper III, Rick Tucker, recently arrived from Oklahoma City Zoo, had in the meantime, braved parental wrath, and pencilled a number on each egg as it appeared.

As January came and went, the female steadfastly sat, through sleet and snow and rain, and a night when the temperature fell to 17°F. The little pool this pair occupied is right next to the Zoo's main cafe, so they were the subject of constant scrutiny and comment from our staff at coffee breaks and lunch, not only bird people, but Mammals, Herps, and Concessions as well.

Although I was appointed Keeper II, to manage the finches and softbills in the "World of Primates" (which opened April 4), and the associated off-exhibit breeding facility, in January, the wonderful collection of

African finches had not yet arrived (and would then spend a month in quarantine), and no birds were yet released in the monumental new ape house. Thus, my first several weeks at Fort Worth Zoo were spent learning the other sections in the bird department. Late January found me doing "Birds of Prey", which included not only the forty-year old Harpy Eagle and her mate, the King Vultures, the Andean Condors, and the testy Bald Eagles, but 46 Roseate Spoonbills, the world's largest captive flock (housed with herons, ibises, storks and gulls, in smelly winter quarters in the Indian One-horned Rhinoceros Barn), the Laughing Gulls, Night Herons, Silver Pheasants, and assorted ducks then occupying the spoonbill's summer aviary, and the flock of 27 Chilean Flamingos (whose enclosure includes the Black-necked Swan Pool) as well.

Feeding the swans while the female was incubating was not the easiest task. I never observed her leaving the nest to eat, therefore lettuce leaves were thrown around the nest. The nearby food pan had to be filled twice daily, as what the swans did not eat was greedily consumed by the Zoo's resident population of Great-tailed Grackles. This had to be done with caution, as the male did not appreciate interference with this

object, and was quite ready to attack anyone attempting to fill it with gamebird pellets. Frank Todd (1979) observes that the legs of the Black-necked Swan are further back on the body than any other swan's, resulting in a greater facility in water, and a corresponding clumsiness on land. Clumsy or not, a charging Black-necked Swan is no joke, and on more than one occasion I found myself breaking into a run. The worst occasions were while I was putting the 27 Chilean Flamingos to bed. During the winter, these birds are accustomed to retiring to a building towards the end of day, requiring only a little prompting from their keeper, who, standing first here, then there, then following them into their night house, can usually put them up, without incident, the main requirements being patience and attention. During the incubation, however, this procedure was repeatedly rudely disrupted by the sudden appearance of the male swan, charging over the crest of a hill. The only option was to allow the flamingos to reassemble and begin the whole thing all over again. It should be noted that this aggression was always directed against the keeper. Although Todd (1979) cautions that Black-necked Swans may attack and even kill flamingos, I have never observed any problems with our birds, nor have I seen more than mild aggression

against the free-ranging Demmoiselle Cranes that spend most of their time in this paddock.

On February 1, 1992, the first cygnet was seen, a tiny, light-grey head peering from beneath its mother. By February 3, all seven had hatched, and while the male was restrained in a pet-carrier and the female held back by Chris Brown and Rick Tucker, I gathered all of them into a towel-lined bucket and brought them to our veterinarian, Doug Pernikov, and veterinary technician Ellen Lancaster, who proceeded to vent-sex them, then pinion them, indicating their sex by the wing thus altered. While participating, I was impressed by the very thick dense down covering these birds, and their ridiculously tiny wings. There was something strongly reminiscent of penguins.

The cygnets were then returned to their parents, but that afternoon, it was decided to relocate parents and offspring to one of the rooms in the Chilean Flamingo night house. Despite the close quarters, and proximity to crowded, honking flamingos, the cygnets thrived, eating lettuce by February 5, and "Layena" Chick-starter with hard-boiled egg



Photo by Barbara Logan, Fort Worth Zoo photographer

These Black-necked Swans hatched in February, 1992 at the Fort Worth Zoo. The cygnets are approximately five months old in this photo.

the day after. The main problem was to avoid enraging the male while taking food into the room or changing soggy mats, for fear he might injure babies while threatening or

attacking.

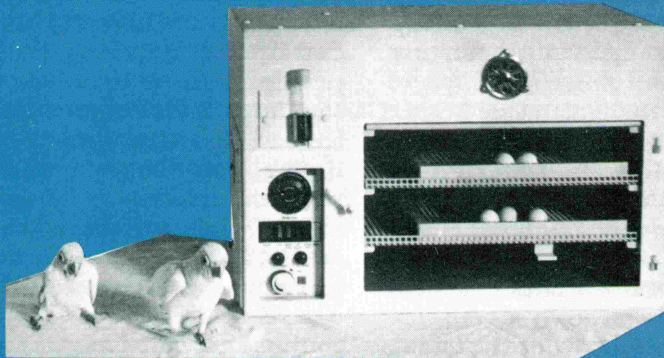
On February 8, the family was returned to its pond (which held no other waterfowl). For the next two days I never saw the female or cygnets out of the water. Initially, the cygnets spent most of their time riding their parents — tucked into their backs and under their wings. Sometimes the parents had the babies well divided, other times, all seven would pile on the female, looking for all the world like a pile of white socks. It was especially funny when the male would fiercely patrol the perimeter of his pond, a tiny second head sticking incongruously out of his back.

Each day, in addition to replenishing the adults' food pan, I would appear first thing each morning, and late that afternoon, with a plastic cafeteria tray spread with "Layena", mashed hard-boiled egg and chopped Romaine lettuce. Positioning this tray took several steps. First, having set the tray on the railing, I would wait until the male was at the other shore. Then I heaved off the large rock holding down the old tray. At this point the male would usually hurtle across the pond, exploding out of the water like a Leopard Seal or Bull Sea Lion, while I beat a hasty retreat. Then I quickly set down the new tray. Finally, when the male had again gone away, I replaced the stone to keep the tray from sliding into the water. I usually had a much-

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entertained audience observing this performance. During these twice-daily occurrences, the male would usually several times give a low, melodious and mournful multisyllabic call, generally followed by a threat display, where he reared out of the water, beating his wings, exposing ugly-looking bare pink knobs on their inner surfaces. I have it on the authority of my fellow keepers that these knobs can leave even uglier-looking bruises on the shins of the uncautious.

Black-necked Swans spend more time carrying their cygnets than any other swan (Johnsgard, 1978, Todd 1979). This, of course, coincides with their being the most aquatic of swans, their peculiarly set-back legs (Todd, 1979) being mentioned earlier. Though only rarely found in entirely salt-water environments, they do occur in brackish marshes and estuaries more than other swans, especially in the subantarctic Falkland Islands. In mainland South America, where they breed in Paraguay, Uruguay, Argentina and Chile, and winter to the three southern provinces of Brazil, north to the tropic of Capricorn (Johnsgard, 1978), they are more of a freshwater bird. The highly aquatic habits, the defensive aggressiveness, and especially the pronounced carrying behaviour appear to have evolved in response to the selective pressure of predatory birds. In the Falklands, the Kelp, Dominican or Southern Black-backed Gull *Larus dominicanus*, the prevalent gull of the south polar zones, is a significant predator of Black-necked Swan eggs. (Johnsgard, 1978, Todd, 1979).

By the third week of February, the seven cygnets were spending far less time on their parents' backs. A week later, they were displaying sudden bursts of activity, racing crazily around their pond, flapping their still tiny wings and throwing water in every direction. At the same time, their necks seemed to lengthen over night, so that they suddenly lost their compact appearance, and steadily thereafter took on an increasingly scruffy appearance. As I write, in mid-April, they are decidedly stereotypically "ugly ducklings," approaching the size of their parents, with long heads and necks, but still amusingly undersized wings. They are still covered in down, though their tail feathers and primaries are starting to come in. Their heads and necks are

quite blackish, in contrast to their pale breasts, but there is yet no indication of the vivid red caruncles of the adults. Johnsgard (1978) estimates this species' fledgling time to be around 100 days, longer than any other swan except the black of Australia.

Fort Worth Zoo's other pair of Black-necked Swans, the male hatched here in 1990, and the female received in exchange the same year, live in the main waterfowl pond which, with its land area, covers a little less than three quarters of an acre, and contains a diverse collection of

Black-necked Swans Hatched in U.S. Zoos, 1959 - 1987

(Compiled from the annual breeding records of the *International Zoo Yearbook*, I-IXXX (Zoological Society of London, 1960 - 1991)

Location	Years Hatched	Total Hatched (Number of dead juveniles)	Yearly Average Clutch (Number of dead juveniles)
New York Zoological park	1960-61, '64 & '81	1 + ? (1)*	1 (1)*
Philadelphia Zoo	1961-64 & '75-76	5 + ? (3)**	1.7 (1)**
Miami (Crandon Park and MetroZoo)	1962-63, '67-68, '70, '83 & '87	1 + ? (5)**	2.6 (1)**
Busch Gardens, Tampa	1964, '67-69, '80-84, '85 & '87	60 (21)	6 (2.1)
San Diego Zoo	1965-66, '69-70, '72, '74-79, '81 & '87	27 (10)	2.1 (0.8)
National Zoological Park, Washington, D.C.	1965-71, '73-79, '81-82 & '85	92 (41)	5.4 (2.4)
Los Angeles Zoo	1967 & '71-73	9 (2)	2.3 (0.5)
Fort Worth Zoo	1970-83 & '86-87	90 (38)	5.6 (2.4)
Oklahoma City Zoo	1970, '77-80, '83 & '85	13 (7)	1.9 (1)
Brit Spauh Zoo, Great Bend, Kansas	1971-74	25 (11)	6.3 (2.8)
Oyster Bay, N.Y. (W. Guest's collection)	1971	3	3
Dallas Zoo	1973, '75 & 78-80	22 (11)	3.1 (1.6)
Sea World, San Diego	1973-77, '81 & '83-84	37 (15)	4.6 (1.9)
Lincoln Park Zoo, Chicago	1974	2 (2)	2 (2)
Lion Country Safari, Laguna Hills, CA	1974-76	11 (5)	3.7 (1.7)
Louisiana Purchase Zoo, Monroe, LA	1975-76 & '83-85	17 (10)	2.8 (1.7)
Mesker Park Zoo, Evansville, IN	1976 & '78-82	20 (5)	3.3 (0.8)
Henry Doorly Zoo, Omaha	1976-77 & '85-86	11 (9)	2.8 (2.3)
Sea World, Orlando	1976-78 & '80-82	31 (4)	5.2 (0.7)
Woodland Park Zoo, Seattle	1976 & '85	6 (1)	3 (0.5)
Riverbanks Zoo, Columbia, SC	1977-78 & '81-87	52 (11)	5.8 (1.2)
Jacksonville, FL	1977-80	17 (3)	4.3 (0.8)
San Antonio Zoo	1977-87	86 (27)	7.8 (2.5)
Cleveland Metroparks Zoo	1978-82 & '84	32 (18)	5.3 (3.0)
Gladys Porter Zoo, Brownsville, TX	1979 & '81-82	9 (3)	3.0 (1.0)
Jackson, MS	1979-81, '83-84 & '87	36 (21)	6.0 (3.5)
Memphis Zoo and Aquarium	1980-81 & '85-87	14 (8)	2.8 (1.6)
Sedgwick County Zoo, Wichita, KS	1980-87	28 (1)	3.5 (0.1)
Wildlife Safari, Winston, OR	1980 & '84	8 (6)	4.0 (3.0)
Ellen Trout Park Zoo, Lufkin, TX	1981 & '83	7 (4)	3.5 (2.0)
Audubon Park Zoo, New Orleans	1981-84	15 (8)	3.8 (2.0)
Caldwell Zoo, Tyler, TX	1981-82 & '87	10 (6)	3.3 (3.0)
Gene Reid Zoo, Tucson	1982-85 & '87	15 (6)	3.0 (1.2)
Columbus Zoological Gardens	1983 & '86-87	4 (2)	1.3 (0.7)
St. Louis Zoo	1983 & '85-87	9 (6)	2.3 (2.0)
Salisbury, Maryland	1983-84 & '86-87	15 (6)	3.8 (1.5)
Greater Baton Rouge Zoo	1984 & '86	2 (1)	1.0 (0.5)
Atlanta Zoological Park	1985 & '87	7 (1)	3.5 (1.0)
Santa Barbara Zoological Gardens	1985	4 (4)	4.0 (4.0)
Lafayette Zoological Park, Norfolk, VA	1987	5 (3)	5.0 (3.0)
White Oak Plantation, Yulee, FL	1987	11 (6)	11.0 (6.0)

* = exact number listed only for 1981

** = exact number listed only after 1963



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Anatids. My fellow Keeper II, Brad Hazelton, first noted this pair's nest February 9, 1992. The first egg was found February 11, and the last of five eggs was discovered February 21. Two of them hatched, on the 26th and 28th of March, respectively. I have noticed that these cygnets, still compact and fluffy in mid-April, are already spending time on the shore with their parents, possibly due to the inexperience of this pair. There do not appear to have been any problems with the other waterfowl in this small lake. Brad Hazelton, and his relief keeper John Wise, have observed no aggression towards the nine Common Shelduck *Tadorna tadorna*, a species that is a notorious victim of Black-necked Swan aggression, presumably because of similarities in plumage and beak (Delacour, 1954; Rutgers & Norris, 1970; Todd, 1979). Our Assistant Curator of Birds, Elizabeth Glassco, a member of the Board of Directors of the International Wild Waterfowl Association, never observed aggression between these two species in her years as Lead Keeper at the National Zoological Park's bird department.

Although Jean Delacour (1954) considered the Black-necked Swan to be a decreasing species and expressed concern for its future, more recent reports are fairly encouraging. Johnsgard (1978) states that this bird "has recently reoccupied a part of its range (in Chile) that had previously been eliminated as a result of local persecution, and in Argentina . . . is locally common in many marshy areas." Frank Todd (1979) considers the population to be "relatively stable."

Very little in the way of non-psittacine birds are now exported from South America, and it has most likely been quite a few years since wild-caught Black-necked Swans arrived in the U.S. In marked contrast to most waterfowl, which, in comparison to parrots, are available at ridiculously low prices, Black-necks usually command a princely sum. Though prices may vary considerably, depending on the breeder or institution, pairs often cost far more than a handfed Scarlet Macaw or eclectus. On one prominent breeder's pricelist, Black-necked Swans are far and away the most expensive waterfowl (with the exception of a few extreme rarities whose prices are not listed at all). On this list, Coscoroba Swans are less

than a quarter of the price of Black-necks, as are Mute and Black Swans. Black-necks run half as much again as hand-reared Magpie Geese or Magellanic Flightless Steamer Ducks, both of which cost slightly more than the highly-prized Red-breasted Goose. Considering the numbers bred, I believe this is a case where demand sets the price. Swans, do after all, hold a place in popular imagination that few other birds, or animals in general, for that matter, have attained. Perhaps it is just as well that this potentially long-lived bird, which Jean Delacour (1954) considered "among the most desirable waterfowl for the adornment of waters," commands such respect, ensuring it a secure position in this country's collections.

Acknowledgements

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