

ORTHOPEDIC SURGERY ON A WHITE PELICAN

BY ELIZABETH A. OEHLENSCHLAEGER

IN the October, 1934, number of 'The Auk' (pp. 538-539) under General Notes, Mr. Walter J. Mueller, formerly of the Milwaukee Public Museum, reported on the use of anesthetics in bird surgery. It may be useful to give a more detailed history of the subsequent care, and final result of the operation, on a White Pelican (*Pelecanus erythrorhynchos*) which displayed the finest courage and intelligence. It was my voluntary and intensely interesting duty to be the 'Dukie's' nurse; his dramatic recovery created attention among local ornithologists and orthopedic surgeons. As this is his third summer's residence in our pool, it seems safe to say that the physical and mental adjustment to his one-sided condition is complete.

The 'Dukie', in point of residence, is the oldest aquatic bird in the Milwaukee Zoological Garden, to which he returns for the winter months. For seventeen years he used his seniority rights in its pool most energetically, gaining thereby a reputation for a very quarrelsome disposition, and was not at all averse to using wings and mandibles to give weight to his argument.

When the accident which robbed him of his wing occurred, it did not seem advisable to do more than temporarily set the broken member, for only one outcome seemed possible, a quick and painless end. The struggle to capture him had caused the dangling, splintered end of the humerus to puncture several pneumatocysts on the left side, lowering it considerably. A number of smaller wounds added to the distressing appearance of the pelican, and it seemed that he could only serve the purpose for which he had been sent to the Milwaukee Public Museum, of becoming one of the group of birds which were being mounted, or serving as a most dejected model. Neither plan appealed to the group of scientists and artists directly concerned; but to set the wing, to restore the bird's usefulness as a living exhibit, the lure of the 'How?', was quite another matter. The decision to help, not kill, was quickly made, and the wing was set. Amputation was not considered at this time, he was given his chance.

With the removal of the cast, three weeks later, came the definite knowledge that "the operation was not successful," and amputation was resorted to as the only way to save the bird's life. As Mr. Mueller has already described this operation, it is not necessary to repeat the details here. Shortly afterward, I visited the 'patient' in his warm, sunny corner of the Museum's roof preparation-room, and was greeted by rattling mandibles, and a group of men with warning gestures and advice to "Look out!" When several weeks later, the bird came to take up his residence in our garden pool, considerable healing had taken place, but a large area of

tissue surrounding the stump was still very inflamed, and a nearly complete paralysis of the left leg was present.

It had been the operating surgeon's advice that the pelican be placed where he could exercise the leg undisturbed by other birds, in order to avoid failure of a very interesting case.

When lifted into our pool, the bird was completely off balance. He tipped over on the uninjured side when attempting to swim, and could walk with great difficulty only, a very distressing thing to watch. For a number of days, we were fearful that weakness and paralysis together might end in his drowning some night, when no one would be near to right him. Curiously, he seemed to realize his condition. Too weak to use the wooden ramp which was placed in the pool for his convenience, he would swim, as best he could, near enough to its incline to allow me to take his mandibles in my hand and gently pull him up out of the water. All the dressings, and the one feeding of the day, were done on the lawn beside the pool. Then he was picked up and put back into the water.

There was a slow development toward a crisis; a gradual weakening, increasing listlessness and loss of appetite. All symptoms indicating septicemia were present especially since, at this time, there was an acute flare-up of inflammation surrounding the area of amputation. Arrangements were made to have the bird destroyed, but the day this unpleasant event was to occur, was the turning-point of his illness. In slow degrees his appetite and strength returned, and by the middle of July, a fair use of the paralyzed leg was noted; on occasions it was quite as efficient as the uninjured member. Whether it was habit or weakness, I never discovered, but the 'Duke of Wellington' was lifted in and out of the pool until the last day of July, when we found him serenely sitting on the stone coping. Naturally, we were delighted.

Then another difficulty arose. With the heat of July came flies. The stump of the humerus had been left with only a thin gauze dressing, and it became apparent that blow-flies had found access to the hollow bone. Sterile maggots are used in modern surgery to "clean up" certain types of septic wounds, but, sterile or otherwise, to me they are the apogee of everything that is loathesome and filthy, and I fought the condition with every available means at my command. In sheer desperation, I filled the bone-cavity, and as much of the underlying tissue as could be reached, with an antiseptic oil which is used with good results in one of the foundries of the city. As it penetrated the wound, the unwholesome tenants came tumbling out in countless numbers. Having accomplished this exodus, the next worry was,—How much added absorption would the pelican be able to withstand in his weakened condition? A few anxious days, and then a sudden spurt of improvement and strength.

Thereafter, when arriving with our pail of fish, we were met by a badly limping pelican. Daily, the distance between the bird and his "dinner-pail" was increased, compelling more activity in the lame leg. By the end of September, he could traverse the distance between the house and the pool, about 500 feet, quite readily. Usually he was, and still is, one of a group of five, that met at the kitchen-door about 4.30 afternoons, one Saint Bernard, and three Scotch terriers, a charming and interesting assembly.

This was written in August, 1936. More than two years have passed since the 'Duke' met with his accident. He is still an object of unusual interest in our sunken garden and proves himself a bird, not only of fine intelligence but of splendid memory as well. Whatever his disposition may have been with others, he takes the fish from our hands, but never, by any chance hurry, do those saw-edged mandibles close on a careless finger. There is still a very decided limp when he walks, but very little effort is made in covering the ground. His balance in the water is perfect, the jump from the side of the pool is made with the remaining wing spread out full. He uses it in the same manner when walking up and down the various terraces which he must climb and descend in his daily walks to the house for his meals. When feeling particularly well, he will suddenly spread his wing and run about the lawns of the garden, his gait at such times having very much the rhythm of a single-footed horse. He comes when called, and seldom fails to meet the family when it arrives home during the afternoon. It is rather startling to see him in the midst of a group of barking, jumping dogs, brushed by their tails, bumped here and there, never belligerent, waiting for the fish that come, as he knows, from our hands only.

Friendly as he is during the day, he is distinctly on the defensive at night, nor does he seem to recognize my voice as the one to which he pays such good attention at other times. He does not leave his resting-place when approached in the dark, but strikes out savagely with wide-open mandibles, and a deep guttural croak. I have reason to remember that any effort on my part to change this nocturnal attitude may be distinctly painful.

Three young Black-crowned Night Heron nestlings shared the pool-coping during part of the last two summers. The 'Duke' did policeman's duty, keeping them away from what he considered his own domain, but eventually recognized the futility of his efforts. When he got close enough to inflict injury, the herons either ran, or, as they matured enough to use their wings, flew away or across the pool to the other side.

At this time, he developed a distinct trait of jealousy which caused much amusement. Normally, he would never swallow a fish with a broken skin or one which was in any way mutilated. The herons were fed small pieces, but if a chance bit of fish were left lying either on the coping or on the

ramp, our fastidious friend would spend minutes in his efforts to pick them up. These efforts were grotesquely funny. He did not cease trying until he had accomplished his purpose. And there was a twinkle of triumph in his knowing eyes as he sailed off over the pool's surface to drink and wash the fishy taste out of his mandibles!

Orthopedic surgery on a White Pelican has proven to be a most interesting study, surgically, humanely, and ornithologically. The stump of the amputated wing is completely hidden under a fine coat of plumage, and it seems fairly certain at this time, that the 'Duke of Wellington' will give our garden an added charm by his presence for years to come.

This year he has become distinctly a 'family' pelican, always joining its members and guests on the terrace facing the sunken garden. He steps up to the low table on which the pre-dinner refreshments are served, and views them with a critical air. We have become accustomed to his presence sufficiently to provide a special 'cocktail' for him in the form of a few small fish. After he has disposed of them, he will either remain one of our group or descend the one low step to the flagged walk, there to preen with very evident contentment and comfort, until we go in to our dinner. It is always a thrilling experience for guests to see the huge, grotesque bird come to us without fear or distrust, and to us, who have worked for him and with him, he has become an object of very warm affection and beauty.

Somewhere in his instinctive memory there must be a picture of Pyramid Lake. When the wind blows off Lake Michigan, he will walk to the top of the hill which overlooks the water. Pulling in his neck, and crouching down, he will catch the stiff breeze in his good wing, and for minutes at a time indulge in flight exercises which also give a peculiar rotary motion to the visible end of the humerus. There is a touch of pathos in his action, which to us who are so fond of the 'Dukie' has its compensation only in the fact that "greater love hath no one" for him, or could give him better care.

926 East Kilbourn Ave.

Milwaukee, Wisconsin