SOMETHING ABOUT PELICANS.

BY M. C. FREDERICK.

A few years ago pelicans were quite common along the ocean front at Santa Barbara, Cal. Habitues of the beach took great pleasure in watching their slow, measured flight as they carefully scanned the water fifteen to twenty-five feet beneath, for now and then there was a sudden folding of a pair of wings, a downward plunge with the speed of an arrow, head first, into the sea, the unerring marksman reappearing in a moment and floating on the waves long enough to reveal a glimpse of a fish gliding down his capacious gullet, and to shake the water from his disheveled plumage.

These interesting birds did not remain long after they became the target for so-called sportsmen, and for some reason have never returned to any extent.

The pelican seems to be a very good-dispositioned creature—large and awkward and amiable, like a young mastiff or baby elephant; yet the following incident, so opposite to pelican nature, shows that he, too, is capable of manifesting decidedly opposite traits.

At Goleta, near Santa Barbara, the terror-stricken cries of a nineteen-months' old child brought the frightened women of the family to the rescue. A huge pelican had attacked the little one, who had been playing in the chicken yard, and, with wings extended, was in angry pursuit, making vicious thrusts at the child's head. The great bird made no effort to escape, but pugnaciously stood its ground, even when the women returned after taking the baby to a place of safety, and fought until they succeeded in capturing it. It measured eight feet from tip to tip. No explanation is offered for its strange misconduct, as it was not hurt in any way and there was no apparent reason for its unheard-of escapade.

A white pelican has for years been the pet of a fisherman's family at Santa Barbara. So remarkable is he for his intelligence that tourists go to see and photograph "Larco's pelican" as one of the sights of the city. This one was captured inland, white pelicans preferring fresh water to salt. The eyes are surrounded by lemon-yellow and the pouch is orange colored. Ordinarily the pouch is so contracted that there is little that is noticeable about it until the mouth is opened; and then only when he wishes to expand it for some purpose. The flexible frame suggests rattan, and the two sides remain parallel or bow out at the will of the owner, who adjusts it to any width occasion may require. The pouch itself, soft as undressed kid, is thin and elastic and capable of great distention.

Occasionally he makes a sound like the suppressed grunting of a pig. When he wishes to pick up a stick or other object the side of the head is turned down to the ground, so the object is grasped lengthwise instead of in the ordinary way.

When he yawns—he is as fond of an after-dinner nap as any gourmand—the neck rests along the back and the bill upon it, like a collapsed letter S. The upper mandible rises high in air, there is a flash of yellow as the pouch widens and rises like a big bubble, it vanishes as quickly and all is over. This remarkable appearance is caused by the pouch turning backward (or wrong side out) over the neck and breast.

Jim is a sociable fellow, and fondles friends and strangers alike, when the latter will permit it, by taking their arm, hand or leg repeatedly between his mandibles. His grip is not strong, but there is a strong, sharp hook on the end of the beak that inspires caution.

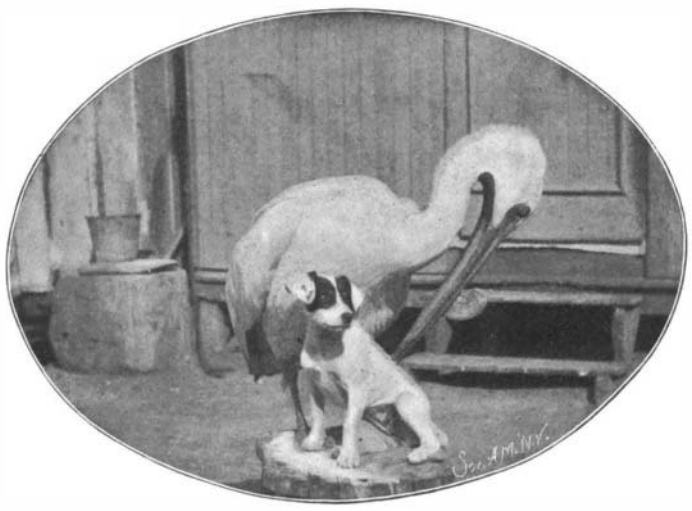
He manifests surprising aptitude in learning the little tricks taught him, and is generally willing to show off for company. At the call of his name he responds as readily as a dog, and is as ready to join in a frolic, catching a ball with great dexterity. This is accomplished by extending the pouch to just the required width, so the ball is as easily held as if caught in a shallow bag.

A favorite trick is to stand motionless while the ball or a pebble is being balanced on his "nose," and then with a quick toss catch it in his mouth.

The human traits of desire for approbation, and jealousy, are displayed to a ludicrous degree, his friend and companion, the fox terrier, usually being the cause of these manifestations. Not infrequently he administers a physical rebuke. In these encounters the pelican generally comes off victorious, the dog prudently retreating before the stabs of the long, sharp-hook-tipped bill.

Otherwise the two live on the most amicable terms. The illustration shows them mounted on an old chair, the pelican scratching the dog's back—their favorite pastime. The satisfaction of the latter is evident from the expression of his face and from the way he leans over toward the bird, one foot resting affectionately on the pelican's foot.

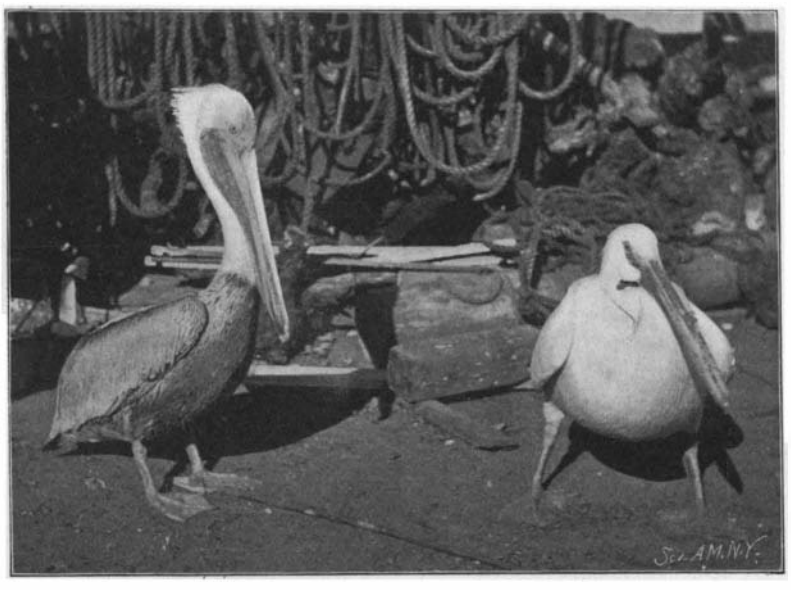
Repeated efforts have been made by the Larcos to domesticate the brown pelican, but while they become very tame they are as stupid as the white one is sagacious, and can be taught nothing; and after a time they fly away with the wild pelicans and are seen no more—except the last one. For several years this one has left in the spring and returned in the fall,



PELICAN AND DOG.

with occasional absences in the winter. His returns are so often followed by a change of weather that he has come to be known as "Larco's weather prophet," and the local papers duly announce his appearance as presaging a storm. This is accounted for by the assumption that fishing is poor during stormy weather, and the pelican knows there is plenty of fish at Larco's to be had for the asking.

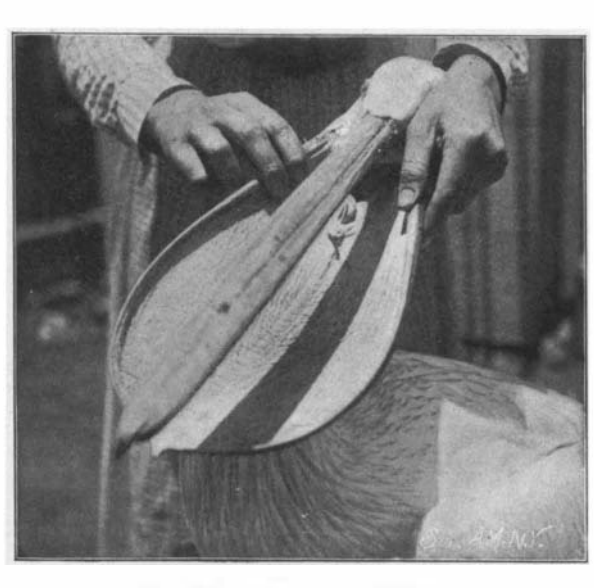
The last departure lasted seven months, and it was thought he had left permanently; but a few days ago he alighted in the fisherman's yard, and was as much at home as ever, accepting the familiarities of strangers as though he had been constantly associated with human beings.



WHITE AND BROWN PELICANS.

The white pelican has never regarded the brown one with favor, though the latter is as friendly as the former will allow. The photograph of the two was taken just after the wanderer's return, and is quite a character study in its way.

The brown pelican is smaller and less graceful than the white (notwithstanding the contradictory evidence of the photograph). The color is brownish gray, or grayish brown, and is called either color. The neck is white, head yellowish, pouch yellowish green with dull red at the throat, and the upper mandible with its large yellow hook has the appearance of having had a coat of bright red paint that has now become sadly weather-beaten. He makes a peculiar hissing sound and snaps his mandibles like castanets.



PELICAN'S POUCH EXPANDED.

The Technical Chemistry School of Berlin.

Technical education in Germany, as is well known, has been developed to a standard of excellence, far superior to that of any other of the great powers. The equipment is of the best; the curriculum is most extensive in range; the professors are the best procurable in the various subjects; and every inducement is offered to the pupils to become thoroughly intimate with certain phases of industry. Probably the Berlin Technical High School is the leading institution of this character in Germany, but it is only typical of similar institutions distributed over the German Empire.

At the Berlin school, in the chemical section alone there are six fully qualified professors for the following branches of this science: Organic chemistry, inorganic chemistry, chemical technology, metallurgy, electro-chemistry, and photo-chemistry.

Further, there are six lecturers for the following branches: Chemistry of foods, including analytical and bacteriological methods; agricultural-chemical technology (sugar, beer, spirits, etc.); vegetable and animal fats, oils, etc., investigation of mineral oils and naphtha products; designing of chemical works and plants; architectural chemical technology; physical chemistry, thermo-chemistry, etc. The comparatively new chair of photo-chemistry affords instruction in spectral analysis, general photography, photo-chemistry, photographic optics, and the construction of photographic optical instruments.

Finally twelve privat docents take the following branches: Electrolytic metallurgy; chemistry of foods; ceramics and mortar; chemistry of the growth of plants; investigation of oils, fats and naphtha, technology of the proteines and albuminoids; repetition of organic chemistry; special chemistry of cement, lime, mortar, plaster, etc.; qualitative and quantitative analysis; aniline dyes; terpenes and camphors; and modern synthetic drugs.

The annual salaries of the qualified professors average $1,725. Various additions to the salaries may be granted by the Educational Council for special services and requirements; up to the present date $2,250 is the highest salary ever paid to any professor of chemistry. They receive further one-fourth of the fees paid by students for lectures in chemistry, and $2.50 per term for every student occupied during the whole day in the chemical laboratories. These additions, however, must not exceed $750 per annum for professors, docents, and privat docents. The professors, lecturers, and assistants are permitted—in so far as it does not interfere with their regular duties—to add to their incomes by private practical work and expert opinions.

The salaries of the assistants average $400 per annum; those who have acted in this capacity for some time may rise to $600. All teachers being state officials, are entitled to pensions.

In 1899 there were no fewer than 41 professors, lecturers, private lecturers and assistants to 278 students, or about one instructor to seven instructed. The average annual expenditure for new apparatus, instruments, repairs, etc., amounts to $8,625.

The Current Supplement.

The front page article of the current SUPPLEMENT, No. 1371, is a handsomely illustrated description of the Charleston Exposition. Of technical interest is a paper on the Paris Automobile Show, illustrated with clear engravings. A succinct discussion of acetylene generators will probably be welcomed at a time when acetylene is gradually widening its field. E. Price-Edwards presents the first installment of an essay on sound signals, which is of particular value in its relation to foghorns. M. Flammarion describes the Perseides as only he can describe them. The discussion of the introduction of a universal language, begun some time ago in the SCIENTIFIC AMERICAN, is continued. The letters received show unusual appreciation of the possibilities as well as the difficulties of the use of such a language.

An official statement recently published regarding the American locomotives purchased by the Bavarian state railroads declares that so far from being unsatisfactory, as various Continental papers have stated, the American engines have proven themselves in many respects distinctly superior to those manufactured in Germany.