

# Tsarina the Python's 20 Foot Stomach Ache.



PHOTO BY ELWIN R. SANDORF, N.Y.

## How Science Saved Our Most Interesting Reptile Invalid from Deliberate Suicide and Is Now Studying Her Symptoms for Possible New Light on One of the Causes of Cancer

By Dr. W. H. Ballou.

**T**SARINA, the great regal python at the New York Zoological Park in the Bronx, has taken the place of Dinah, the famous gorilla, as our most interesting animal invalid. Tsarina is the largest python in captivity. She measures twenty-three feet from the tip of her nose to the tip of her tail.

Approximately twenty feet of this length is now stomach ache. This is what makes Tsarina so interesting to science.

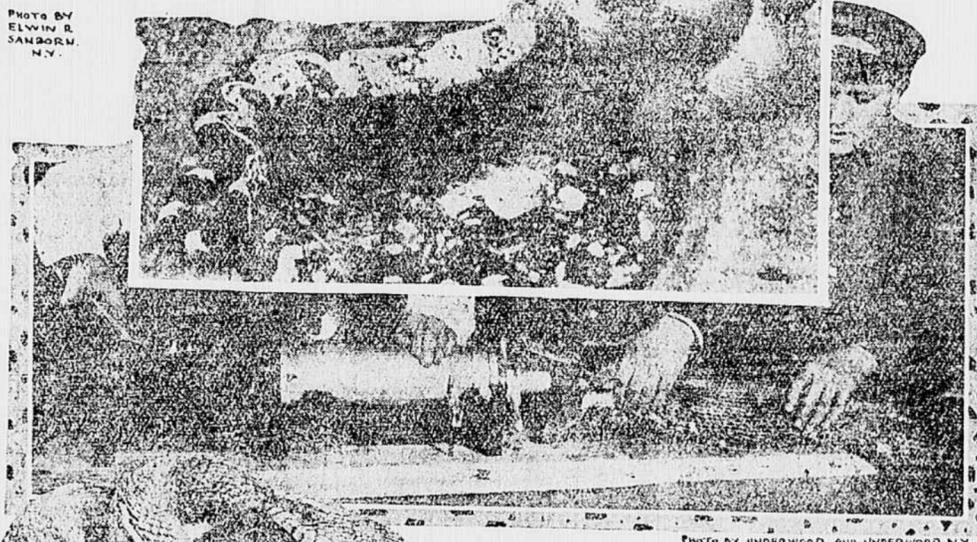
Only one regal python longer than Tsarina has ever been found. That measured thirty feet. Tsarina's beautiful, graceful folds and shining, jeweled skin no doubt made her very desirable to suitors in her native jungle. And her great length made her most formidable to her enemies and her food supply. But now Tsarina, if she reasons at all about it, would cheerfully give up several feet of length, no doubt, to be rid of the same number of feet of discomfort. Similarly the longest-necked and therefore lordliest and most admired giraffe is the fortunate one among his herd until his six or seven feet of throat gets "a cold in it." Then the short-necked giraffes have their inning. So, too, the longest back-legged kangaroo is the Dean Brummel and paladin of his Australian harem until he gets a case of sciatica. Then every extra inch of leg muscle is a handicap.

This nature keeps her eternal balance; or as Jack Johnson, considering those who went up against him in the squared circle, used to formulate the cosmic law: "The bigger they are the harder they fall!"

Tsarina, from the aesthetics of snakeedom, is a beauty indeed. Dr. Raymond L. Ditmars, the noted zoologist of the Bronx Zoo, author of a dozen books on snakes, and, indeed, the world's foremost authority upon them, waxes enthusiastic in his description of her. "Her pattern," he says, "is of rich reticulations of yellow, brown and black, like Oriental tapestry, combined with a jeweled iridescence glowing in all the high lights of her folds. Her eyes are ruddy, like ruby buttons, and her pupils are vertical, like a cat's." Tsarina has been at the park for ten years. She was captured on the island of Borneo. As with most ladies, her age is uncertain.

The first thing that directed attention to

PHOTO BY ELWIN R. SANDORF, N.Y.



Natural Feeding Again. Here the Rat, Bones All Broken Under the Pressure of the Coils, Begins His Journey Down the Snake's Digestive Apparatus.

Tsarina's ill health was her attempt at suicide. When the regal python decides that life is not worth living it proceeds to fade away in as dignified a manner as any ancient Roman who let his life out through his opened veins. The python coils up and refuses to eat. This life gradually and calmly gives way to oblivion. Once before Tsarina had tried suicide—upon her arrival at the zoo. No doubt she was homesick. At any rate, says Dr. Ditmars: "In the first months of her confinement she was nervous and irritable, steadily refusing food and becoming badly emaciated. Forceful feeding saved her from suicide. Thereafter she would feed voluntarily, swallowing an eight-pound rooster, feathers, fighting spurs and all. Again, she would receive two chickens or several rabbits at intervals of ten days apart. In the bathing tank she would coil and bathe for a week, while digesting her meal. She also took kindly, occasionally, to a twenty-five pound pig."

Early in 1917 she manifested the well-known symptoms of suicidal intent. A forty-pound pig was bought for her and preparations were made to finish her hunger strike in much the same way it was ended for the suffragettes—by forcible feeding. This pig, to preserve her from suicide, was some five times larger in body than Tsarina's neck. As Dr. Ditmars characterizes descriptions of snake swallowing as "a string of ridiculous

stories," I prefer to quote accurately what happened from his "Reptiles of the World": "Among snakes the lower jaw is composed of two elongated, nearly straight bones that are connected in front merely by an elastic ligament. This suspension of the lower jaw and the attachment of the upper jaw bones provide for great elasticity and enable the serpent to engulf its prey entire. The prey is usually grasped by the snout when the performance commences. One of the upper jaw bones and the corresponding lower jawbone reach forward. The bones close upon the prey by inserting the recurved teeth, the side of the head is pulled back, drawing the animal a short distance into the mouth. The process is repeated with the other side of the head, each side working in alternation while the quarry is pulled into the mouth and forced into the throat, which, being elastic, stretches to receive it.

"A lateral undulatory movement of the neck commences, which literally seizes the creature in suctorial fashion, greatly assisting the now thoroughly distended jaws. The lever-like suspension of the lower jawbones becomes greatly strained for its normal setting and possibly forms a tight band about the prey, the upper jaw alone pulling in the animal, assisted by movements of the neck.

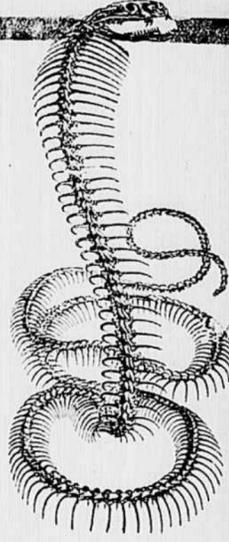
"The serpent's eyes bulge and the skin of the neck is so distended as to widely separate the rows of scales. At frequent intervals the snake pauses to rest, when it forces from between the animal and the lower jaw its tubular breathing appendage. One or two good breaths taken, and then recommences what seems like a most heroic task. Finally, the sinuous movements of the throat engulf the heavy prey. The snake head quickly assumes its normal aspect, only a

A Remarkable Photograph Showing Dr. Ditmars of the Bronx Zoological Park, New York, Pushing a Forty-Pound Pig Down Tsarina's Throat to Prevent Her Suicide. The Photograph Is Arranged to Show the Great Length of the Serpent—Twenty-three Feet from Nose Tip to Tail Tip.

few flabby folds of the skin denoting the astounding feat that has taken place.

"A yawn or two effaces all traces of the task except the distended portion of the body slowly forcing the prey into the stomach by a combination of undulatory movements and an anterior pressure caused by drawing the muscles together. Meantime the

The Skeleton of a Large Snake, Showing the Skeletal Semi-Circular Spines That Guard Its "Inner Tube" and Are the Foundation for the Powerful Muscles That Form Its Rounded Body.



of the "carrier" is given at less than a millimeter, or .0394 parts of an inch. The width of its body was 35 micromillimeters, the diameter of its head 21 micromillimeters, and the width of its intestine canal 16 micromillimeters. Three lips were detected. The mouth had no throat. The front end of the body was supplied with narrow, lateral and cuticular wings. With this infinitely minute creature was visible shadow, supposed to be the vegetable germ of at least one form of cancer, just detectable by the most powerful microscope extant.

The nematodes are very resistant to digestive fluids and are much greater menaces to all animal life, including humans, than either trematode or cestode worms, also disease carriers. They are more typical of the popular conception of the word "worm" than any other representative of the other order of helminths. They endanger life in insufficiently cooked foods. Like the trichina, the disease carrier of pork, they block all the ferments of digestion, penetrate the mucous membrane, circulate in the blood, and finally lodge in congenial tissues of the body, to become encysted, provided that the body is able to stand the inflammation produced by the invasion. And there certainly is evidence that they are directly concerned in some types of cancer.

"Tsarina," says Dr. Ditmars, "has had many of the troubles of pythons in captivity. Pythons contract a deadly mouth disease a times, as do all big snakes. I think this is brought about by an enervated condition robbing the blood of its germicidal qualities during a period of disordered stomach. At the mouth of a snake that is not feeding becomes stored with stagnant salivary secretions, this region is attacked by the many kinds of bacteria that always exist in the mouth. A slight sore or bruise is generally the start of the trouble.

"The infected sore causes intense irritation, followed by a sloughing. If not immediately arrested it works deeper, attacking the jawbones. The teeth become loosened and fall out and necrosis of the bone develops. Microscopic examination of the diseased tissue points to a specific bacillus, a thick, rod-shaped form. We now detect the approach of the disease immediately by the presence of a red spot, examining all specimens once or twice a week, and stop the growth by an antiseptic solution.

"In case of loose teeth, they are removed of necrosis, the bone is removed and the wound treated. During this treatment and after the operation, and this also applies to deadly cobras, the serpent is fed forcibly with beaten eggs through a rubber tube."