

EVOLUTION

# Will Males Become Extinct?

## Scientist Engulfed in Deepest Leap Year Gloom Paints Alarming Picture—But Things May Not Really Be So Bad

By DR. FRANK THONE

**W**ILL MALES become extinct? Is the stronger sex becoming weaker? Are the strutting, dominating, high-crested lords of creation on the way out, on the sad road of no returning, which dinosaur and dodo have trod?

This question, raised in a recent address by Prof. David Causey of the University of Arkansas, started a bit of a stir. To be sure, the stir was to a considerable extent a stir of amusement, for Prof. Causey's paper was avowedly a "spoof."

The address was given before a biological honor society, Phi Sigma. The Phi Sigs are of the younger generation of scientists, so that they are able to relish a spice of fun on the solid meat of their learning.

Gloomed Prof. Causey, from a determinedly owlish countenance:

"These are indeed times which try men's souls. We seem to be entering the twilight of masculinity. No longer do we find these brawny heroes of old, who, with mailed fist and two-handed sword, debated abstruse questions along the highways and byways of the world. These are no more crusades to the East to fight the mighty Saracens, no more quests in search of the Holy Grail; the last of the dragons, the Dragon Lizard of Komodo, is to be seen in some of our zoological gardens.

"As I glance shudderingly backward over the last quarter century I see strange and startling innovations which threaten our social organization and cause me to fear to look into the future.

### Male Sanctuaries Invaded

"As I look backward I see the invasion of the old time barbershop by a silken horde. Swept before it went those prerequisites of masculinity—the huge and shining loving cups of brass which graced the floor, the dear old Police Gazette with its anatomical studies on the covers. Gone!

"I see a piratical assumption of that dearest of masculine attire—pants. And such pants—conceived in the disordered brain of a maniac and brought into real-

ity by a colorblind painter with a rainbow for a brush.

"Consider the situation of today: a poor man might be delivered, as a wee babe of course, by a woman doctor; reared and educated by female preceptors and school teachers; be shaved by a lady barber, have his teeth pulled by a feminine dentist, his clothes bought by his wife, his laws made by feminine legislators and argued in court by modern Portias; might work all his life for a captainess of industry; and at the end, after a lifetime of submission, be buried by a woman preacher."

If the discouraged human male turns to the other animals for comfort, he at first sees a little encouragement in such thumping specimens of masculine pre-eminence as the huge chest-beating gorilla, the bugling bull moose and the tough old ram of the mountains. But this is a deceptive consolation, for if he seeks further, especially in the lower orders of animals, there appear many and humiliating examples of disgracefully henpecked males, who have been in servance vile so long that they have got quite used to it—apparently even like it.

### The Henpecked Ostrich

In many cases where actual parental care is bestowed upon the offspring, both sexes cooperate in the duties, Prof. Causey admitted. But in many other cases, he countered, the male has all of them thrust upon him. Perhaps most bird parents share the task of nest building, but in the case of the ostrich, the male has this task all by himself. True, it is but a mere hole scooped out in the sand, but it's the best the poor old fellow can do. It is the principle involved which is serious.

No doubt you have heard of the stickleback fish and the wonderful nest it makes, the professor continued. The poor male stickleback builds it all by himself, a marvelous little home of pieces of water weeds glued together with a glue his own little body provides.

"And when the little home is completed, does the female come gladly to lay her eggs and to brighten the little

home with domestic touches? No. She has to be driven in by threats and force. She even refuses to lay sufficient eggs and the poor little man needs must find other wives until at last by polygamous endeavors he gets his little egg basket filled.

"Does one of the reluctant mothers ever pause to offer him aid in the care of the young, even so little as a word of advice as to their diet? Not a single one. The tiny babies are left to the clumsy mercies of the father."

The male stickleback is merely one of a long series of instances where the male is forced to take on all the parental care. Among birds are such examples as the Emu, of crossword puzzle fame, who sits alone for eight weary weeks while his wife goes in for whatever careering lady emus affect; the Kiwi of New Zealand, the Tintamou, the Rhea, and the Cassowary.

### Males Are "Poor Fish"

Prof. Causey went on with his depressing catalog of male woes: "The female seahorse, or sea mare I presume one would call her, succeeds, by wiles and pretty tricks which I presume the feminine part of my audience thoroughly understand, in reducing the poor seahorse to a state of ecstatic anaesthesia and then deftly tucks the eggs into her husband's pocket. He is then abandoned to his paternal troubles. What she does while the henpecked father nurses the children is not common knowledge. All the seahorses' relatives appear to be treated as ignominiously. Invertebrate companions in such disgrace are such far apart forms as the giant water bugs and the sea spiders."

Male citizens of the watery world very commonly play the role of "poor fish," tending the family while Mama goes gadding. Among the examples cited by Prof. Causey are the common bullhead, the black bass, and the bowfin. More remote geographically are the rare lungfish of Africa, South America and Australia. Some male fish, like the gafftopsail cat of Gulf Coast waters, carry their eggs in their mouths until the young hatch, and even afterwards, while the babies are still too small to fight their own battles, Papa will open his wide mouth like a door of safety and welcome them back to the place where they were hatched, when danger threat-

ens. During the long weeks of incubation, the poor father fish cannot eat, for fear of swallowing his own offspring, like Saturn of old. Some of them actually starve during this heroic period of family care. Then the purpose of Nature is defeated, for the helpless unhatched fishlings perish too.

#### Forced to be Nursemaids

"I trust that these scattered examples will suffice to illustrate my first point that in so many cases the female avoids her natural duties and thrusts them upon her mate who becomes a mere nursemaid," Prof. Causey argued. "You may not agree that this is decadence—no doubt some of you because of sexual bias or inexperience will indignantly deny it. To those of wider experience I humbly submit that many a man's downfall began when a fair maid tied an apron around him and led him to the dishpan in the kitchen sink."

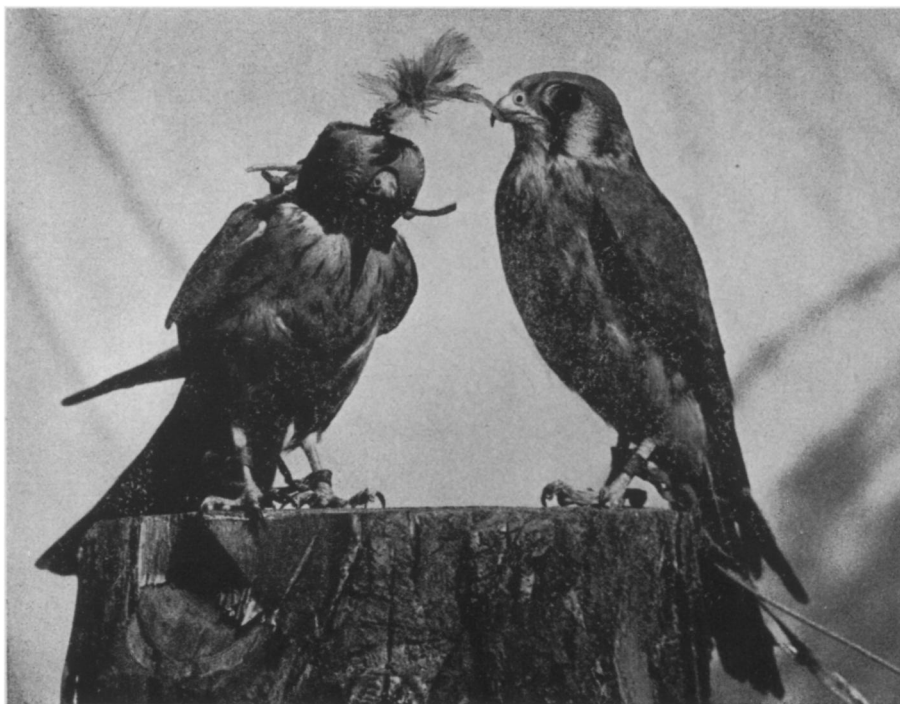
But mere male subservency only begins the catalog of male decadence. We are used to thinking of males as bigger than females, simply because that is the case with the animals with which we are most familiar, especially the mammals. But the mammals are by no means certain to continue their dominance of the earth—a dominance gained only a short time ago, geologically speaking. Among the other great group of warm-blooded animals, the birds, greater male size is by no means the rule. In many bird species, both sexes are of about the same size, and in some, such as the hawks, the female is as much as a third larger.

But it is when we venture down among the backboneless animals, the "creeping things" of the earth and the waters that are under the earth, that we find the female mighty and dominant, and the miserable little shrimp of a male amounting to nothing and getting nowhere. Sometimes the difference is not apparent at the start, but it soon makes itself unmistakably evident.

#### Male Termite Insignificance

Prof. Causey cited an insect example:

"Among the termites the sexes appear to get a fair and even start. They pair off after the swarming flight and start new societies where fate and chance permit. Then, slowly but surely, the male loses ground and becomes dwarfed into relative insignificance. We have a specimen of an African termite queen over four inches in length and with an abdomen as ponderous as that of the proverbial alderman. Her consort,



#### MIGHTIER MADAME

*The female hawk (at right) is bigger by a third than the male (left, wearing falconer's hood.) Photo by John and Frank Craighead.*

poor wretch, is a miserable little fellow not three-quarters of an inch long. In life he hovered tremblingly beneath that Gargantuan belly.

"Hegner states that in the silk spiders the female is always larger than the male, and tells of a tropical spider species in which the female is two inches long and the male a mere tenth of an inch in length."

#### Parasite Upon a Parasite

In human society, mere pity is the lot of the male who is smaller and weaker than his mate, whether in body or mind; but utter contempt is dealt out to the man who becomes a parasite upon a woman. Yet among the lower animals this extreme of decadence is by no means unknown. It is the normal thing in many worms which are themselves parasites on other animals. The female is a parasite, and the male a parasite upon her; that would seem to be about as low as a living being could get. Yet there is at least one step lower still, Prof. Causey indicated. There are even worms in which several males live permanently as parasitic inhabitants of the reproductive cavities of the females!

In the depths of the ocean occurs another shameful example of this melancholy condition of male parasitism. There are certain gaping-mouthed black fishes that live down there in the per-

petual dark, luring unsuspecting little fishes into the traps of their jaws with dangling, luminescent baits. Attached to them in a most literal sense are the males, attached to any part of the female's body, and attached for life. They have neither jaws nor teeth nor fins. They have degenerated to practically nothing but a set of male reproductive organs. The female fish may be more than three feet in length; the male a scant four inches. When naturalists first came upon these strange fishes they thought the attached males were simply odd body growths or appendages. Only when they cut them open did they find out what they were.

#### Not Even Biologically Necessary

Reduction to midget parasitism is not the end of the Decline of the Male. In some orders of animals he serves his biological purpose and then dies, or even gets killed and eaten; in other groups he is simply dispensed with as not even biologically necessary, for many generations in succession.

Perhaps the most common example of the male who dies when his contribution to the next generation has been made is found among the bees. At the end of the drone's mating with a queen, his sex organs are torn from his body, and he falls mangled and dying to the ground. The surviving drones, unmated,

hang around the hive in unproductive idleness until frost threatens in autumn. Then their cross spinster sisters, the workers, either sting them to death or drive them out of doors to freeze.

In other cases, the male, having made progeny biologically possible, contributes also to making it physiologically possible: the female first accepts him for a mate, then eats him.

"Possibly you will recall the mating promenade of the scorpion," said Prof. Causey. "How coy and passive the female is as the male clasps her claw-like

hands and leads her about in a weird dance. At the conclusion of the dance, they retire to some secluded spot, a hole in the ground or under a stone.

"Some time later the female comes out—alone."

Certain spiders are guilty of the same kind of mate-murder, with a grisly banquet afterwards, unless the terrified male can get away fast enough. The Black Widow was accused by Prof. Causey of being a self-made widow.

At the last end of male decadence is male disappearance. Many insects, as well as lowlier and less familiar animal forms that live in the water, produce eggs or living young from virgin females, for generation after generation. In some species, no male individual has ever been found, though females swarm by millions. The common little green insect pest, the plant louse or aphid, pro-

duces only females all summer long, but when frost is near condescends to have a few sons. These mate with the daughters, and of these unions tougher eggs are born, that will survive winter—why, no one knows. But so long as times are good, these Adamless Eves seemingly want no males around, disturbing their green Eden.

Yet, after drawing up this pessimistic picture of the decadence of the male, Prof. Causey declined to make an outright prediction that males will disappear from the world altogether. "But I wonder," he concluded, "in those days of long ahead, will your daughters and my daughters some day point with amusement, in some great museum, to the beautifully preserved specimen of the last man, standing alongside the Great Auk and the Dodo? I wonder."

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PHYSICS-MEDICINE

## Method for Decreasing X-Ray Burns Developed in New York

A NEW method of decreasing materially the dangerous X-ray burns which have long been a hazard in the treatment of cancer and other malignant growths by these piercing radiations was described before the meeting of the American Physical Society by Dr. G. Failla, chief physicist of Memorial Hospital of New York.

One possibility of the new method is that better treatment of deep-seated cancers will be achieved, according to Dr. Failla, because the present limitation of the amount of radiation which can be given a patient is determined by the burning power of the rays on the skin. Any method to reduce the skin burning from X-ray will allow more potent radiation treatment.

Dr. Failla, long known in this country for his basic contributions to medical X-ray therapy, told how he is now cutting out much of the secondary electrons which are an essential part of any X-ray beam. It is these charged particles of electricity which actually split apart the atoms of the skin and produce ionization in them. It is the ionization which causes the skin reddening and damage even though seemingly adequate protection is afforded by heavy shields of lead.

The lead shield, Dr. Failla points out, protects other parts of the body than

the point where the radiation is desired but, of necessity, the opening for the X-rays allows any electrons also in the beam to come through.

Dr. Failla's new method takes advantage of the fact that when electrons strike matter they are deflected at large angles. By setting up a system of baffles or stops a beam of X-rays containing only the desired gamma ray type of radiation can be attained. The deflected electrons are caught by the baffles along the X-ray beam path. The useful radiation of the gamma type goes through the holes in the baffles undisturbed.

"The advantage of the use of X-ray beams stripped of secondary electrons," said Dr. Failla, "is apparent in X-ray therapy, since the ionization in the skin and the consequent damage are materially reduced."

While present work with the method is confined to energy ranges around 250,000 volts, the adaptation necessary to extend the method to X-ray tubes of more than 1,000,000 volts was described by the cancer therapy authority.

The new baffle method is a simpler device for obtaining results which now can only be attained by the use of electric and magnetic fields that will deflect aside the electrons as they come along the X-ray beam.

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