

ANIMAL SOCIOLOGY

# The Turbulent Sex

## Suppression of Males in Insect Societies Brings Peace— But Only at Price of Stagnation: Progress Wholly Stopped

By DR. FRANK THONE

**M**EN ARE the world's worst nuisances. If you doubt that, just eavesdrop at any "hen-party." There you will hear the shortcomings of the obstreperous male discussed with clarity—and with as much charity as the subject deserves, but not a particle more. Always showing off, always demanding attention, always disrupting the best-laid plans. Begin when they're little boys, walking on their hands to catch the attention of the new little girl with the yellow curls; bickering, bloodying each other's noses. Keep it up as they grow older: competing furiously for intrinsically useless tokens, whether golf cups or gold coins; encouraging shows of violence, like football and prizefights; ripping the world to pieces with senseless wars. No doubt of it, males are nuisances.

And now there comes one of their own number, an eminent scientist who has devoted a long lifetime to the study of societies among all kinds of animals but especially those more smooth-running ones that insects form, to give scholarly support to the indictment against the male. His name is Dr. William Morton Wheeler, and his researches have been conducted at the Biological Institute of Harvard University. He discussed his findings with acumen and humor, at a recent meeting of the American Society of Naturalists.

Not for Dr. Wheeler was silence, dictated by sentimental loyalty to his own sex. A true scientist, he presents the truth as he finds it, whether it profits his own side of the case or not. And in the long run, anyway, he intimates, a frank recognition of the natural obstreperousness of mammalian males will be profitable. If we know our own shortcomings, and know further that we can never wholly get rid of them, we may at least eventually learn how to direct more usefully a part of this tendency to "up and bust things," and possibly discover also how to get along with the undirectable surplus with as little self-harm as possible. . . . We have pretty

well got rid of duelling; maybe we can eliminate or at least limit war.

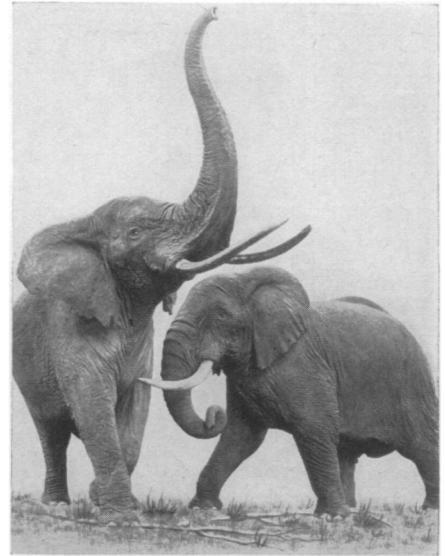
As directed by Solomon long ago, Dr. Wheeler has gone to the ant to learn wisdom. He has studied her ways, and the ways of her relatives the wasps and bees, and the ways of those other social insects the termites which are often called ants although they are not.

These two great groups of insects, the ant-bee-wasp folk and the termites, have developed the most perfect societies in the world. There are never any internal wars, never any duels, never even an interesting bar-room fight (though they do have their bootleggers!)—never any of the noisy upsetting behavior we have come to look upon as natural to males among ourselves and our backboned kin, down through apes and dogs to turtles and fish, with a side branch to accommodate gamecocks and even male canaries. There isn't any ego in a beehive or a termite nest. Rugged individualism, which has got our own social order into such a mess, just doesn't exist for ants and wasps. The individual is simply a functional part of the group. "Assert yourself!" is clean outside the whole behavior pattern of the social insects.

### Not Pacifists

Why? How do these swarming small creatures, these meek who may in the end inherit the earth which we messy giants apparently don't know how to use properly anyway—how do they manage to get along without the least trace of internal friction?

It isn't because they are incapable of aggression or fighting. Ants are anything but pacifists; their inter-tribal wars are the most cruel and ruthless of any that we know, and many of their species are heartless slave-raiders as well. And if you think the meekness of their winged kin extends to outsiders, just go poke a stick into a beehive or a hornet's nest! No; although their societies have been organized on the present basis for millions of years as against man's mere thousands, the social insects have not invented international



### DISORDER AND PROGRESS

*One of nature's most spectacular examples of the kind of male rivalry which makes for disorder—and progress.*

peace. But they do keep peace among the members of the same social group. Again, why?

Because, Dr. Wheeler says, all the orders of social insects have solved the Problem of the Male. The sex that rules the roost among the backboned animals, especially the mammals and birds, is practically non-existent as a social force among the bees, ants and wasps; and in the other great order of social insects, the termites, the males have been as completely "socialized" as their meek sisters. No aggressive sex, no fights. It is all very simple.

But if you eliminate the males, how do you keep the group alive? Used as we are to the biological processes among ourselves and the other familiar larger animals, in which male cooperation is necessary for the production of every individual, that question looks like a poser.

But the social insects do not find it so. They have simply made reproduction a specialized job—one of the many things they carry on at a high level of efficiency by assigning it along with other functions in the astonishing division of labor they somehow manage to carry out without any bosses. They have given the job of egg-laying to one female (or at most a very few) in the

group, and that one female needs but one mate. So one male is enough, biologically, for an insect city of many thousands of individuals.

In a termite colony the queen-mother, with the assistance of her consort, founds the colony by digging out a bridal chamber and laying her first eggs. The worker termites developing from those eggs enlarge the nest, and thenceforth the queen and her mate work no more. She becomes enormous—loses her figure entirely—until her body is almost wholly a mass of egg-producing tissue. The workers feed her, and a guard of fierce-jawed soldier termites form a ring around her to guard her against any molestation.

### Nation Without Sex

Her mate, bigger than the workers, but insignificant in comparison with her maternal vastness, remains at her side, mating with her from time to time, so that she may keep on laying eggs, laying, laying, laying. But he exerts no other influence in the affairs of the termitarium. Aside from this parental pair, the termite colony is a nation without sex; for the workers and soldiers, though anatomically both males and females, are physiologically "neuters" incapable of mating or parenthood. To found new colonies and thus perpetuate and increase the species, a few young are diverted from the physiologically sexless state by special feeding and permitted to grow up into young queens and males.

But if the lone male in a termite colony is reduced to a position compared with which that of the late Prince Albert, Victoria's consort, was a veritable czarism, the role of the male among the bees is even more drastically reduced. The male termite at least stays alive, and is a real husband to his queen. The male bee mates but once with the young queen who deigns to accept him on her marriage flight—and that very act seals his doom. For part of his vital organs are thereby torn out: his marriage is hymeneal hari-kari, no less.

The mated queen flies back to her hive to assume the duties of motherhood. She lives in the dark, laying endless series of eggs in the brood-cells the workers prepare for her. How, from that single fatal wedding, is she able to keep up her tremendous fertility?

The answer to that riddle had to await the researches of many generations of puzzled entomologists and practical bee-keepers. But it was finally learned that the queen bee has in her body a

special container in which the entire stock of male germ-cells from her long-dead mate are stored. The queen is able to release them at will, to fertilize the eggs she lays. She must release them, for if she lays unfertilized eggs they hatch only into useless males—drones.

This is the ultimate and completest solution of the Problem of the Male—the essential parts of him, biologically speaking, are stored in the female's body, and the rest, the living individual, is ruthlessly mangled, discarded, and left to die.

The elimination of the male sex is carried just as far among the worker bees as it is with the queen; for whereas the termites have "neuter" males as well as "neuter" females among their soldier and worker castes, the bees and their relatives the ants and wasps have none but "neuter" females. A beehive is a Utopia of old maids: incapable of responding to any attentions on the part of the useless surviving drones, they hustle these poor useless male bums about, and when chilly weather comes on they thrust them forth of doors to perish of cold and want. They manage the affairs of the hive, and when a jealous old queen would sting and kill oncoming successor-queens in their brood-cells these efficient spinsters put even their mother into her place, and decide among themselves which and how many of her fully female daughters and biologically necessary but otherwise useless sons may be permitted to mature.

This occasional effort of a queen-bee to kill her female offspring is the nearest approach to a sex-moved *crime passionnel* that ever occurs among the social

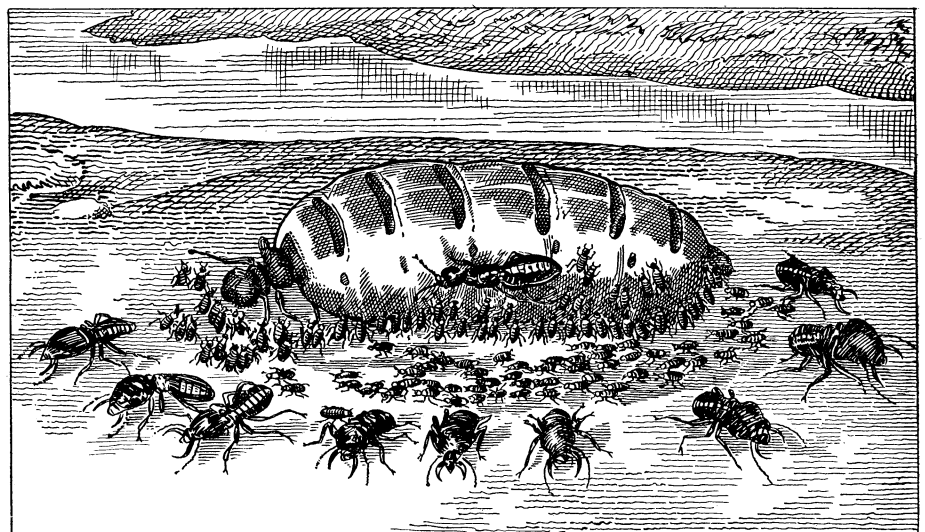
insects. And even that the sexless spinsters who are the real bosses of the Soviet of the hive are usually able to prevent.

As compared with these almost perfectly smooth-running, female-controlled societies among the insects, the turbulent groups among male-dominated higher vertebrates cut a sorry figure, if we take completeness of socialization for a criterion of high biological development. Says Dr. Wheeler:

"The male has now become so dominant in our modern patriarchal societies that we might regard them as male societies in contradistinction to the female societies of the bees and ants and lower mammals and the bisexual societies of the termites. Moreover, many of the manifestations of this dominance show quite clearly that a portion of the human males have never been completely socialized. Throughout the ages the aggressiveness, curiosity, unstable intelligence, contentiousness and other asocial and antisocial tendencies which the male has inherited from his anthropoid ancestors have kept society in a constant turmoil.

### Misbehavior

"Indeed our histories seem to be little more than the elaborately recorded misbehavior of males. We might divide human males into three ill-defined classes, one of which comprises the completely socialized individuals, who maintain the social structure, a second much smaller class whose dominance is largely manifested in intellectual or emotional fields and who create the great social values and also the great social illusions that develop civilization, and



BRIDAL CHAMBER OF THE TERMITES

The enormous-bodied queen is shown with her much smaller mate, surrounded by "neuter" worker insects and guarded by a formidable ring of soldier termites.

third, a not inconsiderable criminal class of low mental age and with unbalanced endocrines who in the past have succeeded in destroying every civilization. Since the World War we have seen such a truly magnificent display of the social and antisocial behavior of males of the second and third classes, especially in Continental Europe, China, Japan and the United States, that further comment is superfluous."

Yet this boiling of the social kettle kept up by the irrepressibly troublesome male is not a net social loss, Dr. Wheeler indicates in closing his discussion. Wastefully perhaps, but no less effectively, this constant unrest makes for progress. Ants, bees, wasps and termites have been as they are for fifty or sixty million years—absolute communisms world without end amen. In far less than that time the mammals have arisen, evolved their diverse forms, seized dominance of the world and finally produced the most restless, most troublesome, most pugnacious and most intelligent animal on earth—Man.

So Dr. Wheeler ends up by admitting that the "restlessly questing intellect, driven by the dominance of the mammalian male, furnishes the necessary stimulus to progress in human societies. Female societies, like those of the ants and bees, lower mammals, the matriarchal human clans and bisexual societies like those of the termites are indeed harmonious, but stationary and incapable of further development."

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SOCIAL PSYCHOLOGY

## Mechanophobia, Merely a Futile Reaction to Depression

OUR LANGUAGE has long been in need of a pair of new words. The mass-psychology phenomena which they should express began at least as early as the opening of the Industrial Revolution, a century and a half ago, or some such matter. These phenomena are perfectly well known and understood, but so far as the dictionary shows, at least, they have never received distinctive names. Since they have come to the fore again during the present time, as they always come to the fore during times of economic stress, it would seem that a christening should be in order.

The first of the phenomena might appropriately be called mechanophobia, which englishes as a dread, or fear, or hatred of machines. Whenever a considerable advance in machinery takes place, it enables the owners of the machines to dispense with a certain number of human laborers hitherto employed. Under the laissez-faire doctrine which came in, unluckily, at the same time with labor-saving machinery, the owner of the machines is under no obligation to his dismissed "hands," and can let them starve if he likes. Indeed, if he does anything else, if he shares his new profits with them in any way, he is to that extent apostate to the pure doctrine of rugged individualism.

The machine-supplanted men, being human, resent their distress, and seek an object for their anger. The selfishness of the "boss," being an abstract quality, is invisible, intangible. Indeed, the whole person of the "boss" is often as not invisible and intangible, especially if the "boss" be that modern anomaly, a corporation which is nevertheless bodiless, as well as soulless. But the machines are visible and tangible and the men begin to hate them: they become mechanophobiacs. They are often joined in their mechanophobia by humanitarians in higher social brackets, who commonly vent their hostility to the machines in magazine articles.

Most of the highbrow mechanophobiacs, as well as many of the more helpless-minded of the dispossessed workers, progress no further. Their attitude remains an attitude only; it does

not emerge into action. But there may be some of them, especially those of the lower level driven by want to desperation, who are of a more activist bent. They want to destroy the machines that have destroyed them, and occasionally some of them do destroy the machines, as the angry English weavers did when textile mills first began to wipe out home weaving.

In such men, mechanophobia, or hatred of machines, has passed over into mechanoclasm, or smashing of machines. The mechanophobiacs have become mechanoclasts.

Of course, mechanophobiacs gain nothing by their inactive hatred. Neither do mechanoclasts gain anything by their smashing, as Sampson gained nothing by pulling down the Philistine temple—save, perhaps, the suicide's grim satisfaction in dragging his tormentor with him over the precipice. More reasonable persons see that the machines are potentially highly useful to society and that the thing to be attacked is the greed of the men who pervert them to anti-social uses. They realize that the logical program will be either to bring the machine-owners to a more social ethic, whether by persuasion or coercion, or, failing that, to take the machines away from the owners and hand them over to the workers. The former method is now being tried in the United States of the New Deal, the latter in the U.S.S.R.

Either program, or both, may fail of perfect realization. But in neither is there place for the weak and illogical philosophies of mechanophobia and mechanoclasm.

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Scientists studying collections of animal bones in the U. S. National Museum recently discovered seven new kinds of jaguars to be added to the nine known species.

The Public Works Administration has allotted \$150,000 to the Geological Survey for installation of gauging stations to measure stream flow and silt movement as they relate to flood control and land losses on soil erosion projects.