



Evolution of Domestication

DOMESTICATION of animals evolved along with agriculture, not ahead of it as is often assumed, declares Dr. E. Werth, of Berlin-Dahlem (*Die Naturwissenschaften*, April 28). He sees the domestication process as having evolved in two major steps, corresponding to the two major advances in agricultural technique.

Most primitive of agricultural techniques is the type that uses the hoe as its principal implement. Hoe-farmers are such peoples as many present-day African tribes, and the corn-raising American Indians. The one great advance in agriculture, that divides it definitely into two parts (even though the invention itself was prehistoric or protohistoric) was the plow.

Dr. Werth agrees with practically all students of early man in the belief that the hunting peoples of the Old Stone Age had no domestic animals. Just as they emerged, in that last paleolithic stage known technically as the Azilian, they picked up the dog, the first of all domesticated animals.

Coming into the first of the neolithic, agricultural stages, man domesticated first the *smaller* animals, like pigs, sheep, goats and poultry. These were easier to capture and pen; they could be (and probably usually were) kept under the same roof with the family for better protection. They were good primarily for food, fiber, milk and eggs, not as work-animals.

After the invention of the plow, the value of muscles other than those of the farmer and his womenfolk recommended itself. And so came about the pursuit, capture and bondage of horse, ox, ass, camel and (in the East) the water-buffalo. This quite literally drew in

their train a whole array of new implements that made farming and transport easier—first the plow, then harrow, sledge, cart and wagon, chariot and carriage.

Dr. Werth's arrangement is intriguingly neat—perhaps too neat to be true. Nevertheless it recommends itself as at least a working hypothesis, to be tested for discovery whether it be true or not.

Science News Letter, June 3, 1939

PUBLIC HEALTH

Eminent Disease Fighter Has Undiagnosed Ailment

ONE OF America's Number One disease fighters, Dr. James P. Leake, Medical Director, U. S. Public Health Service, is seriously ill in the U. S. Marine Hospital, Baltimore.

Physicians have not yet been able to make a diagnosis of what ails him, but colleagues in the federal health service are sure that he is not suffering from any of the infectious diseases he has been investigating. Latest reports (May 27) are that he is "doing very nicely."

Dr. Leake is recognized as an authority on infantile paralysis, sleeping sickness or encephalitis, smallpox and other virus-caused ailments, and has for years been in the forefront of the fight against epidemics of these diseases. He has only recently returned from South Carolina where he was investigating the infantile paralysis outbreak in that state.

The laboratory work on tetraethyl lead, which led to recognition of its danger when it was introduced in anti-knock gasolines, was done under Dr. Leake's supervision, and he has engaged in many other fights against disease.

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PHYSICS

Phenomenon of Aurora Is Duplicated in Laboratory

See Front Cover

BY FIRING a stream of electrons through neon gas and curving their luminous train with a magnet, Dr. M. E. Bell has demonstrated in the Westinghouse Research Laboratories the spectacle Nature provides when the earth deflects streams of electrons from the sun and sends them colliding with molecules of gas in the upper air, making the Aurora Borealis. Visitors at New York's World's Fair will see the artificial Aurora as it is illustrated on the front cover of this week's SCIENCE NEWS LETTER.

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Here is a book that will open before you a world of undreamed wonders. Study the ant's astounding organizations and you will marvel at the uncanny parallels between its social systems and those of man . . . at the workings of its democratic, fascist, communistic and slave states. You will meet such intriguing personalities of the ant colony as queens, cows, pets, warriors, policemen, slaves and thieves. You will see ingenious adaptations to environment that rival man's resourcefulness. Your imagination will be gripped by the cleverness with which the ant solves its political, economic and social problems.



. . . will tempt you to build your own glass nest (a few minutes' chore), or study the drama of ant life in the nearest field or garden. Having read the book, you will find in actual "field study" your key to the most rewarding, intriguing, educational hobby that ever brightened your leisure moments. You will witness with your own eyes, as you do through the author's, the daily activities, trials, failures and triumphs of the world's most advanced and systematic creature . . . the ant.

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