

strenuous days of nature faking it is after all not surprising that even the salamanders are beginning to take an active part in affairs.

We watched the progress of the fight for a few moments each time at intervals of about forty-five minutes for three hours.

Thinking that the occurrence might be familiar to herpetologists, I sent a brief account of it to my friend Dr. C. Hart Merriam for information. In his reply he regarded the observation as important and expressed a request that the account be published in SCIENCE as a matter of permanent record.

The combatants were a salamander and a garter snake. The salamander was about eight inches in length, of a rather dark brown color above and lighter below. On the back and sides including the tail were irregularly elongated roundish darker spots. His smooth skin was naturally moist and being plump and chunky he seemed to be a bull-dog of his kind. Judging from the specimens kindly shown me by Dr. Stejneger in the National Museum the salamander was probably an *Amblystoma*.

The garter snake was of good size, about two feet in length, and with other stripes had reddish-brown markings on the sides. Both animals seemed to be in perfect condition for a hard fight.

When first seen in a narrow dry water course I supposed that the snake was swallowing the salamander, but the squirming of the snake attracted closer attention and the salamander was found to have a firm grip on the snake at the base of the right jaw and neck. The snake could not bite the salamander but writhed so as to turn him over and over and drag him along on his side or back without affecting the grip of the salamander. His whole attention seemed to be given to holding on without caring whether he was right side up or not.

This moderately active writhing in which the snake furnished all the energy continued for over two hours with gradually waning strength on the part of the snake. In the course of the struggle they passed beneath a bank and out of sight, but when last seen, half an hour later they were out again at the old

place. This time all was quiet. The salamander was now in control. He had changed his grip. He was directly in front of the snake and had a deep hold on its upper jaw covering its nostrils. The lower jaw of the snake was hanging limp. The salamander seemed fresh in the enjoyment of his victory, while the snake was nearly dead.

J. S. DILLER

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TROTTING AND PACING: DOMINANT AND RECESSIVE?

In his book, *The American Trotter*, Mr. S. W. Parlin makes several allusions to the production of pacers by trotters which suggested to me the likelihood that the pacing gait may be a Mendelian recessive in the horse. In reply to my questions, Mr. Parlin, who has kindly interested himself in the matter, assures me that he has never known a natural trotter produced by two natural pacers, though, of course, pacers are often produced by trotters. Mr. John Thayer, of Lancaster, Mass., tells me that his experience agrees with that of Mr. Parlin. Certain alleged cases to the contrary have proved to be given erroneously. It seems, therefore that there is *prima facie* reason to suppose that the trotting gait depends on some physiological factor which is absent from the pacer. My object in writing this letter is to suggest to American readers the desirability of investigating the subject more fully. The materials for doing so are not to be had in England. It is scarcely necessary to point out the extraordinary interest of this illustration of Mendelian inheritance, if it should prove to be genuine. No doubt either gait may to some extent be acquired artificially by training, but I understand that the distinction between the natural trotter and the natural pacer is so definite that doubtful cases are exceptional.

W. BATESON

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