

it.⁴ The southern half of an old fault was ruptured for a distance of over twenty miles and a fault scarp formed that in places had a height of ten to fifteen feet. Where the rock surface was exposed the fault plane had a dip of 54° due west.

The effect of this displacement was to increase the elevation of the mountain range relative to Pleasant Valley. Another and older fault scarp, six to ten feet in height, which can be traced along the base of the range several miles north of the scarp of 1915, is described by Jones as "comparatively recent."

It is now known that large faults are the result of repeated small displacements, such as the one that occurred in Pleasant Valley. Students of structural geology have not given sufficient attention to the movements of the earth's crust that are going on at the present time. In tectonics no less than in sedimentation "the present is the key to the past." In this connection it is encouraging to note that the National Research Council has recently appointed a committee on the testing of isostasy in the Basin Ranges.

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DIPLOID MALES FROM FERTILIZED EGGS IN HYMENOPTERA

THE question of sex determination and parthenogenesis in Hymenoptera has been the subject of much interest and debate among bee breeders and biologists. According to Dzierzon (1845) the drones of the honey-bee are developed from unfertilized eggs, queens and workers from fertilized. Recent cytological work has shown that in the germ tract at least females are diploid, males haploid. Experiments with the parasitic wasp, *Habrobracon*, have shown orange eye color to be inherited in sex-linkoid fashion so that males inherit from their mother alone, females from both sexes. A few patroclinous mosaic males with black eyes arose from certain crosses, orange-eyed females by black-eyed males, from which only orange males were to be expected. These exceptional black males mated to orange females produced orange daughters and in a single case an orange brother of patroclinous males produced only black daughters. It was therefore postulated that fertilization was incomplete, and that cleavage of male and female pronuclei had taken place without fusion. These mosaic males were of normal fertility.

⁴ Jones, J. Claude, "The Pleasant Valley, Nevada, earthquake of October 2, 1915," *Bull. Seis. Soc. Amer.*, Vol. 5, pp. 190-205, 1915.

At the same time there were produced from similar crosses black-eyed patroclinous males that were completely or almost completely sterile. Their few daughters were black-eyed, completely sterile and often morphologically abnormal. The mosaic theory was naturally extended to include these anomalous males. Their sterility and that of their daughters remained unexplained.

With the occurrence of further mutations it has been possible to show that these males are in all probability not haploid mosaics but are diploid, inheriting from both parents factors modifying the same structure. Thus two recessive wing mutations reconstitute the normal wing in the black-eyed males as in their sisters, while their orange-eyed brothers possess the maternal wing character.

The questions as to cause of sterility in these patroclinous males and their few daughters, as to why these males transmit only black and finally why they are males at all are still unanswered. Experiments now in progress may solve some of these questions. Results will be published in full later.

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A CONSERVATIONIST'S CREED AS TO WILD-LIFE ADMINISTRATION

(1) I BELIEVE that the fullest use should be made of our country's wild life resources from the standpoint of human benefit—for beauty, education, scientific study, recreation, for sport, for food, for fur, etc. All these possible uses should be considered in the administration of wild life, not any one of them exclusively of the others. At the same time, any one use may be of more importance than the others in a given locality, so that such locality may be administered with that particular value most prominently in view.

(2) I believe that that portion of our wild animal life known as "game" belongs no more to the sportsman than to other classes of people who do not pursue it with shotgun and rifle. More and more the notebook, the field glass and the camera are being employed in the pursuit of game as well as other animals. The newer generation by hundreds of thousands is turning to nature-out-of-doors, for recreation, instruction and pleasure through such agencies as the national parks, summer camps, Boy Scouts, Girl Scouts and Camp Fire Girls. Indeed, these other claimants upon our "game" resources are probably reaching to numbers greater than those of active sportsmen; *their* rights certainly deserve at least equal consideration.