

followed by experiments with 'K' powder kindly sent to us by Dr. Kendall. A protocol suggested by him, using the Rawlins strain of *B. typhosus*, was followed exactly. At least five attempts in accordance with this protocol and many more based on the first reports of the medium were made.

In connection with the 'K' medium, many difficulties were encountered; for example, no uniformity of pH from tube to tube could be attained. It also occasionally develops a spontaneous turbidity without inoculation.

In summary we may state that persistent efforts to confirm Dr. Kendall's experiments have been uniformly negative.

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UNIVALENT CHROMOSOMES OF TRADESCANTIA VIRGINIANA

AN esteemed correspondent, in *SCIENCE* (Vol. 77, pp. 49-50), states that, in *Tradescantia virginiana*, "the apparently serially arranged, miscalled univalent

chromosomes represent in reality a segmented pachytene in which the synapctic pairs are lined up, back to back." I have lately been studying the pachytene of this species, and also of *Rhoeo discolor*: and have succeeded in obtaining clear preparations. In *Rhoeo*, only the sub-terminal parts of the 12 chromosomes synapse; and are afterwards seen at diplotene to separate, leaving terminal junctions. Thus the 12 bodies seen in the rings appear to me to be these univalents attached at the ends. For if they were "pairs . . . back to back," there would be, I think, 6 of them. In *Tradescantia virginiana* (which is, in my opinion, rightly regarded as a tetraploid), 12 of the 24 chromosomes can be seen to have synapsed, at pachytene, with their 12 homologues; while their sub-terminal parts show synapsis between 4 chromosomes. These can be seen to separate at diplotene, except for their terminal junctions. The 24 bodies seen in rings, in chains, or singly, are, I think, the univalents. For if they were "pairs . . . back to back," there would be apparently 12 of them.

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UNIVERSITY EXPEDITION TO STUDY THE NATIVES OF CENTRAL AUSTRALIA

IN August, 1932, an expedition to study the natives of Central Australia was organized by the Board for Anthropological Research of the University of Adelaide, in conjunction with the South Australian Museum. The expenses were chiefly met by a grant from the Rockefeller Foundation, administered through the Australian National Research Council. The situation chosen on this occasion was Mount Liebig, situated almost on the Tropic of Capricorn, 200 miles by track west of Alice Springs. The natives belonging to this portion of Central Australia have hitherto escaped contact with Europeans, save to a very superficial extent. By means of a preliminary survey by Mr. Kramer, of the Aborigines Friends Association, in whom these natives had complete confidence, over 130 aborigines, including men, women and children, were gathered together for observation. Their equilibrium had been a little disturbed by a raid from an adjacent tribe, in which 7 men had traveled 100 miles to secure two women, killing their common husbands and one of the women, and abducting the other.

The personnel of the expedition included amongst others Dr. T. D. Campbell, to whom much of the credit of its success is due, Professors T. Harvey Johnston, C. S. Hicks and J. B. Cleland, Dr. H. K.

Fry, Mr. H. M. Hale, director of the South Australian Museum, and Messrs. N. B. Tindale and J. H. Gray. As on previous occasions, the natives submitted themselves to many kinds of tests, some of them very trying, without the slightest murmur or objection.

Their good humor and sense of fun were again shown to a striking degree. Not the slightest attempt was made by any native to abstract articles from the camp, even though they could very easily have done so and must have coveted many of the objects seen. Any article accidentally lost by the party was almost invariably found by the natives and returned; one member, whilst watching a corroboree at night, dropped, without knowing it, two postage stamps; these were picked up and returned to camp, evidently being recognized as something unusual.

As the expedition had only a short time at its disposal, the study of the natives had to be concentrated. In physical anthropology this is an advantage; the native readily tires and novelty soon wears off. It would be probably difficult to hold together a body of 100 natives for a period as long as a month; many would desire before then to go for a "walk about."

Professor Hicks with his assistants studied each day the basal metabolism of two fresh natives. This was accompanied by a close study of the pulse and respiration rates, and of the body and skin temperatures throughout the morning as the warmth increased.

¹ Died February 28, 1933.