This upper limit of probability strongly suggests that the observed frequency can be attributed to selection operating on the genotype, and that certain combinations of alleles, in particular $S_1 S_3$, $S_2 S_3$ and $S_1 S_2$, have been favoured in the course of the improvement of the sweet cherry.

Irrespective of whether this effect is due to inter-allelic interactions, or whether more extensive chromosome regions are involved, its significance for plant breeding is obvious. Furthermore, this result clearly demonstrates the response to selection of characters that might otherwise be classified as neutral to the forces operating, and underlines the importance of selection pressure[2] as opposed to genetic drift[3] in determining the frequency of Mendelian characters.

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Chromosomes of South American Amphibians

THE amphibian anurans constitute very interesting material, not only for the cytogenetic study of the evolutionary mechanism of sex determination, but also because they offer prospects from the evolutionary, phylogenetic and cytotaxonomic points of view.

South American species offer a wide scope for investigation due to their abundance and their distribution in different geographical regions of the Continent.

The only species which have been studied up to the present are: *Bufo arenarum* (Hensel)[1] and *Dendrophrynicus stelzneri*[2] which are representatives of the families Bufonidae and Brachycephalidae respectively.

With the view of extending this investigation, we have studied other species belonging to different families (Table 1).

Table 1

Species	Family	Diploid No. (2n)	Type of chromosomes
Bufo d'orbignyi	Bufonidae	22	Metacentrics
Odontophrynus americanus	Ceratophrydae	42	Metacentrics
Ceratophrys ornata	Ceratophrydae	88, 92, 98, 108	Metacentrics
Leptodactylus ocellatus	Leptodactylidae	22	Metacentrics
Pseudopaludicola falcipes	Leptodactylidae	22	Metacentrics
Pseudis paradoxa	Pseudidae	22	Metacentrics
Hyla raddiana raddiana	Hylidae	24	Metacentrics

Hyla raddiana raddiana presents, during the first meiotic metaphase, a differential bivalent, that differs from the rest of the autosomes, and is similar to that described in *Bufo arenarum* by one of us[1]. We did not attribute the characteristics of sex chromosomes to their bivalent as Yosida does[3] in a recent paper. The most remarkable fact observed by us is the high number of chromosomes in *Odontophrynus americanus* and *Ceratophrys ornata*.

Odontophrynus americanus has the highest number of chromosomes in an anuran described up to now. *Ceratophrys ornata* is unique among all the amphibians, urodeles and anurans, known up to the present for their high number of chromosomes.

From the cytotaxonomic and evolutionary points of view the taxonomic position of the two genera presents a problem, since they have been considered by Noble[4] as belonging to the family Bufonidae and by Davies[5] to the family Leptodactylidae, the karyotype of which is characterized by a diploid number of $2n = 22$ chromosomes. We suggest that the genera *Odontophrynus* and *Ceratophrys* should be included in a different group, as they appear in the amphibian list published by Cei[6] but forming part of the family Ceratophrydae.

In all the species described here, the chromosomes of the first meiotic metaphase were found to be highly condensed, with two distal localized chiasmata. The primitive annular configuration exhibited by the bivalents during the diplonema remains masked at the moment of the metaphase. None of the species studied shows sex chromosomes that could be differentiated by cytogenetical analysis.

Our observations thus support the views of Galgano[7], Saez *et al.*[8] and Wickbom[9], with reference to the problem of the existence of sex chromosomes in the amphibians.

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ANTHROPOLOGY

The Kanam Jaw

SINCE Dr. and Mrs. L. S. B. Leakey discovered that the Oldowan pebble tool-maker in Tanganyika was an Australopithecine (*Zinjanthropus boisei*)[1], I have been frequently asked whether this development has any bearing on the unsolved problem of the Kanam mandible which was recovered by Dr. Leakey in 1932 from deposits in Kenya apparently at the same cultural horizon as the newly discovered Olduvai skull. The Kanam mandible was referred to *Homo kanamensis* sp. nov.[2] and is preserved in the British Museum (Natural History).

As the Kanam mandible has small front teeth and an apparent chin it was regarded by some authorities as indicating the existence of the modern type of man in Lower Pleistocene times, but Prof. P. G. H. Boswell, having formed the opinion in the field that the geological age of the specimen was not beyond doubt, suggested that it should be placed in "a suspense account" pending further discoveries[3].