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Villarroel, H. and P.Zamorano. Academia Superior de Ciencias Pedagogicas, Valparaiso, Chile. Drosophila species which inhabit the National Park "La Campana".

The particular geographic configuration which presents Chile, both externally and internally (Brncic 1970), has permitted the development of a flora and fauna fundamentally endemic (Reiche 1907; Fuenzalida 1950). The Drosophilidae family constitutes a good example of this phenomenon.

The purpose of this work is to carry out a preliminary search of the Drosophila species which live in the National Park "La Campana" Valparaiso. This site is considered as one of the most interesting ecological areas in Central Chile (Rundel & Weisser 1975).

The collections were made during the period of October 1982 and March 1983. The capture was done by means of the usual trapping method with fermented banana bait.

Table 1. Total number of flies and their corresponding percentages.

Species	No. of Flies	Percentages
D.amplipennis	192	9.68
D.araucana	569	28.69
D.busckii	1	0.05
D.immigrans	428	21.58
D.pavani	27	1.36
D.repleta	66	3.33
D.subobscura	565	28.50
Total	1983	100.00

Of the 33 species described for Chile by Brncic (1957a, 1962a), 9 Drosophila species (Table 1) were collected in the National Park, which have been grouped according to Brncic (1970) in: (a) widespread species: D.busckii, D.immigrans, D.melanogaster, D.repleta & D.simulans; (b) endemic and ecologically restricted species: D.amplipennis; (c) endemic and ecologically versatile species: D.araucana and D.pavani.

We must add that on this occasion samples of D.subobscura were also collected, which correspond to a colonizing species for Chile (Brncic & Budnik 1980).

Finally we desire to point out that the place chosen for our study presents very interesting biological characteristics, such as the presence of one set of typical Drosophila species, which is found in relation to specific habitats. This event will permit us to carry out important studies on the biology of populations of these organisms.

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Whitmore, T. and W.-E.Kalisch. Ruhr-Universität Bochum, FR Germany. Hoechst 33258 staining of surface spread polytene chromosomes in D.hydei.

The bibenzimidole derivative Hoechst 33258 has been used extensively in the past as a DNA-specific fluorochrome in cytofluorometric investigations of metaphase chromosomes (see for example, Holmquist 1975; Latt & Wohlleb 1975; Wheeler & Altenberg 1977; Singh & Gupta 1982). Its use with polytene chromosomes has been, however, rather limited (Holmquist 1975; Lakhotia & Mishra 1980; Martin & Sedat 1982). We found that it can also be used, similar to

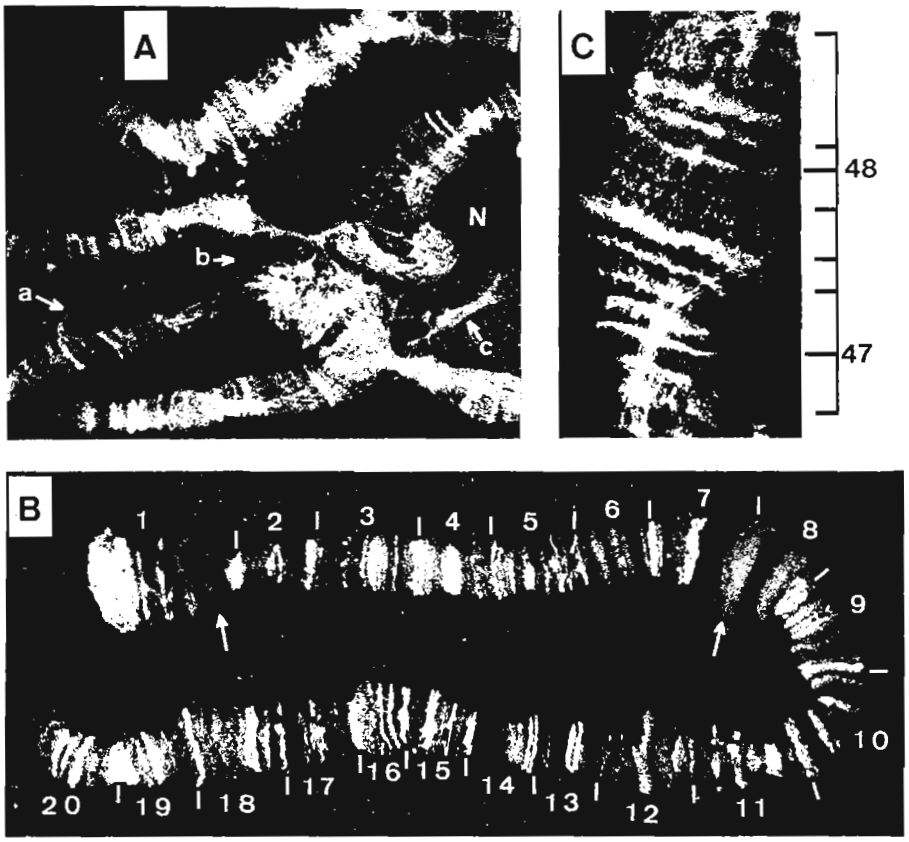

Figure 1. (A) D.hydei, chromoccenter with nucleolus (N), arrows indicate (a) intercalary DNA "ectopic pairing", (b) proximal connections between chromosomes and (c) intranucleolar DNA (nucleolar chromatin thread). x 750
(B) D.hydei, X-chromosome, arrows point to two examples of puffed regions by 1d and 7d/8a. x 550
(C) D.hydei, Chromosome 2, region 46D-48C, showing the band-interbadn pattern of a highly spread chromosome. x 650

corophosphine O (Nash & Plaut 1965; Barr & Plaut 1966), as a simple tool to help demonstrate with salivary gland polytene chromosomes intranucleolar DNA (nucleolar chromatin threads), intercalary chromoregions "ectopic pairing" (Fig. 1A), puffed regions (Fig. 1B) as well as band-interband patterns (Fig. 1C).

Surface spread polytene (SSP) chromosomes were prepared basically as described by Kalisch & Whitmore (1983) with the exception that the crhomosomes were picked up on subbed slides instead of EM grids (for further details on surface spreading of polytene chromosomes, see also: Kalisch & Hägele 1981, 1982; Kalisch 1982a,b; Kalisch & Jacob 1983). The staining with Hoechst 33258 was done with a modification of the method of Lakhotia & Kumar McIllvaine buffer (0.1 M, pH 4.0), rinsed with rinsed with distilled water and mounted in the same McIllvaine buffer, then sealed with rubber cement and stored approx. 24-48 hr in the dark before viewing which helps against photofading. We used a rather high concentration of Hoechst 33258 to ensure sufficient fluorescence of even extremely small chromatin finbers seen for example in the interband regions or those connecting the proximal ends of the chromosomes (Fig. 1A).

Photos were taken using a Zeiss photo microscope coupled with a Zeiss III RS fluorescence attachment and 25/40 Plan-NEOFLUAR oil/water immersion objections on either Agfapan 25 ASA or Kodak Tri-X 400 ASA film.

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