D. gaucha males are confronted with D. pavani females.

These observations on "density effect" upon mating activity of both D. gaucha and D. pavani are different than those found for other species by Spiess (1970) and Spiess and Spiess (1969). These authors observed that females seem to require a courtship summation before mating, and that mating increases when the number of courting pairs is greater. In the present case, there seems to exist some type of interference among mating pairs, which reduces the receptivity of the females independently of the space available for their activity.

References: Koref-Santibañez, S., 1964 Evolution 18: 245-251; Koref-Santibañez, S. and E. del Solar, 1961 Evolution 15: 401-406; Spiess, E., 1970 Evolutionary Biol. 4: 315-379; Spiess, E. and L. Spiess, 1969 Evolution 23: 225-236.

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Kuroda, Y. National Institute of Genetics, Misima, Japan. Effects of substances with ecdysone and juvenile hormone activity on the growth of embryonic tissues from D. melanogaster in culture.

Ecdysterone and inokosterone, which have been isolated from plants and previously shown to have ecdysone activity in the differentiation of eye-antennal discs of Drosophila mature larvae in organ culture (1), were tested for their activity to promote the growth of embryonic Drosophila tissues cultured in medium K-6' supplemented with 10% calf serum. The result is shown in Table 1.

Table 1. Effects of ecdysone analogues on the growth of embryonic Drosophila tissues in culture.

Ecdysone analogue	No. of explants tested	No. of explants in which growth was observed	Percent growth
Control	34	28	82
Ecdysterone, 0.1 mg/ml	20	17	85
0.01 mg/ml	23	22	96
0.001 mg/ml	24	16	67
Inokosterone, 0.0001 mg/ml	20	4	20

Among ecdysone analogues tested ecdysterone at the concentration of 0.01 mg/ml had a slight growth-promoting effect, whereas inokosterone at as low concentration as 0.0001 mg/ml had an inhibitory effect.

Dodecyl methyl ether (DME), a substance acting as juvenile hormone, was tested at various concentrations for its growth-promoting effect on embryonic Drosophila tissues. The results are shown in Table 2.

Table 2. Effects of DME on the growth of embryonic Drosophila tissues in culture.

Concentration of DME (mg/ml)	No. of explants tested	No. of explants in which growth was observed	Percent growth
Control	16	12	75
10.0	13	2	15
1.0	5	1	20
0.1	8	7	88
0.01	22	18	82

It was found that 0.1 mg/ml DME stimulated the growth of tissues, whereas with higher concentrations than 1.0 mg/ml an inhibitory effect was observed as compared with the control cultures without it.

Reference: 1. Kuroda, Y., 1969 Japan. J. Genetics 44, Suppl. 1: 42.