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Correction on the cytogenetic location of *Nervana 1* and 2.

We wish to correct a mistake that was made on the cytological location of *Nervana 1* and 2 (*Nrv1* and 2) as reported by two of us (Sun and Salvaterra, 1995). These genes are homologous to Na⁺, K⁺-ATPase b subunits from other species (Sun and Salvaterra, 1995). Figure 1 shows salivary polytene chromosomes of a *Df(2L)J-H/+* larva. *Df(2L)J-H* is deficient for 27C2-9;28B3-4 (Tiong and Nash, 1990). A section of Y chromosome spans the deficient segment and is not in polytene form and therefore appears as a gap in this region. Using the deficiency as a landmark and looking to the left, one sees 27B4-C1, then a barely visible 27B3 and then a dark line marking the position of the *Nrv1* and 2 RNA probes hybridizing in the vicinity of 27B1-2. In other preparations, we have also seen that these probes hybridize to the left of the deficiency, *Df(2L)spd¹²* (27C1-2;28A) (Neumann and Cohen, 1996).

Salivary gland preparations followed the method of Lin (1993) except that the slides used were precoated with polylysine from Sigma and then coated again with a brief dip in standard subbing solution of 1% gelatin 0.1% chromium potassium sulfate. Preparations were squashed between two taped bundles of slides. Pressure was applied with a vice grip as suggested by Hepperle (1995). Hybridization was carried out with digoxigenin-labeled *Nrv1* and 2 RNA probes, and visualized by incubation with alkaline phosphatase conjugated anti-digoxigenine antibody followed by development with bromochloroindolphenylphosphate/nitroblue tetrazolium solution.

Southern blots of *SalI* digests of the Berkeley Genome Project P1 clones DS02944 from region 27A1-27B2 and DS00391 from region 27B1-27C1 were probed with three different genomic subclones: one from the 3' region of *Nrv1* and the others from either the 5' or 3' region of *Nrv2*. The 3' *Nrv1* and the 3' *Nrv2* probes exposed the same pattern of fragments, but the 5' *Nrv2* probe hybridized to DS00391 but not to DS02944. Both P1 clones share the 27B1-2 cytology, but the fact that part of *Nrv2* is missing from the DS02944 clone indicates that DS02944 terminates in that same region also. This would place *Nrv1* and 2 in 27B2.

Using the Berkeley Drosophila Genome Project BLAST search engine, we found that a 341bp shared sequence tagged site or (STS) (Dm80A2S) from the European Mapping Project (EMP) matches part of our *Nrv1* genomic DNA sequence. The STS has a primary *in situ* localization at 27B-C and a secondary site at 15D. The same search revealed a comment from Michael Ashburner to the EMP (1996) which noted the identity of the STS sequence as part of *Nervana* and its conflict with the published localization at 92C-D which we now recognize as incorrect. We did not detect a secondary site of hybridization.

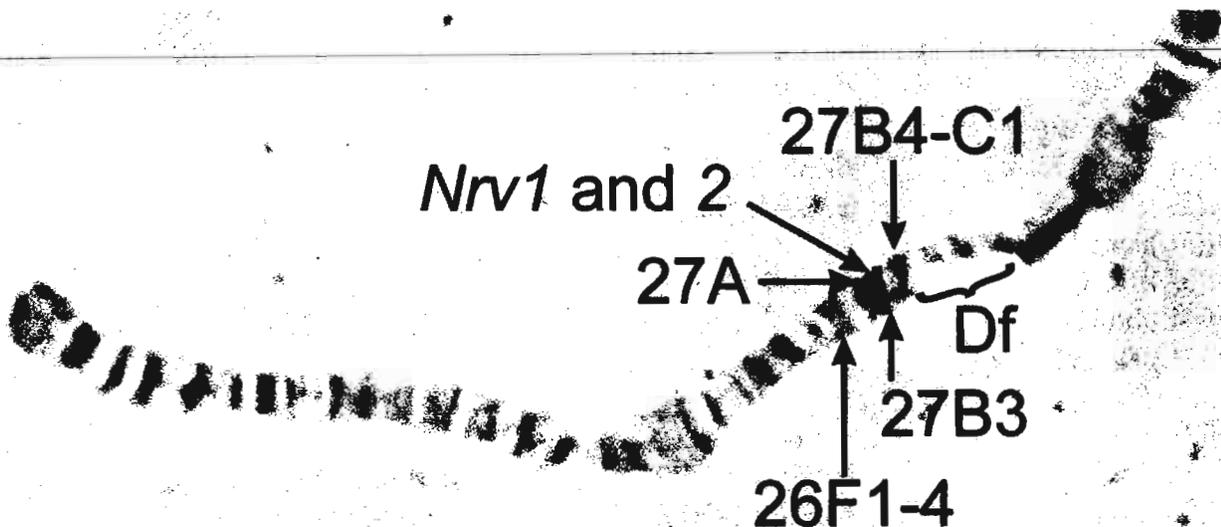


Figure 1. *In situ* hybridization of *Df(2L)J-H/+* polytene chromosomes marked with RNA probes to *Nrv1* and 2. The heterozygous deficient region is indicated by Df. Cytogenetic identity is based upon comparisons with the maps of Bridges (1938, 1942) and Lefevre (1978) which were compiled by Lindsley and Zimm (1992). Photographic maps from FlyBase were also used.

Using the combined evidence we are assigning *Nervana 1* and 2 to 27B1-2.

Acknowledgments: We wish to thank Robert Barber and Kazuo Ikeda for help and advice with photography, Linda Iverson for helpful discussions, David Nash for sending us the *Df(2L)J-H* stock, the Bloomington Stock Center for providing *Df(2L)spd²* and to Lawrence Zipursky for P1 clones from the Berkeley Genome Project whose members we also thank.

References: Bridges, C.B., 1935, J. Hered. 26: 60-64; Bridges, P.N., 1942, J. Hered. 33: 403-408; Hepperle, B., 1995, Dros. Inf. Serv. 76: 175-176; Lefevre, G., 1976, *The Genetics and Biology of Drosophila* (Ashburner, M., and E. Novitski, eds.) Academic Press 1a: 31-66; Lin, J. K., 1993, Dros. Inf. Serv. 72: 73-77; Lindsley, D.L., and G.G. Zimm 1992, *The Genome of Drosophila melanogaster*. Academic Press; Neumann, C.J., and S.M. Cohen 1996, Genetics 142: 1147-1155; Sun, B., and P.M. Salvaterra 1995, Proc. Natl. Acad. Sci. USA 92: 5396-5400; Tiong, S.Y.K., and D. Nash 1990, Genetics 124: 889-897.

Mutation Notes - Other Species

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A spontaneous mutation in *Drosophila malerkotliana*.

Drosophila malerkotliana is a member of the *bipunctinata* complex of the *ananassae* subgroup of the *melanogaster* species group. No spontaneous or induced mutation has been described in this species so far. In the present study we report a spontaneous autosomal recessive mutation in *D. malerkotliana*.

In our laboratory we detected several females and males with spread wings in one stock which originated from a naturally inseminated isofemale line obtained from Janshi, India, in 1993. These spread-winged flies were aspirated out and maintained in vials containing wheat cream agar medium. These flies were used for making crosses. The crosses between spread-winged males and females produced spread-winged offspring indicating that the culture was pure for spread-wings.

Table 1. The normal, reciprocal and test crosses between normal and spread winged flies in *Drosophila malerkotliana*.

Class	Normal cross			Reciprocal cross			Test cross		
	Number observed (a)	Number expected (mn)	χ^2	Number observed (a)	Number expected (mn)	χ^2	Number observed (a)	Number expected (mn)	χ^2
Wild	246.00	241.50	0.04	221.00	214.50	0.10	86.00	83.50	0.04
Spread wing	76.00	80.50	0.12	65.00	71.50	0.30	81.00	83.50	0.04
Total	322.00	322.00	0.16	286.00	286.00	0.40	167.00	167.00	0.08

P_{value} = insignificant at 0.05 level.

The pattern of inheritance of spread-wings was studied by crossing spread-winged males with wild type females. In the reciprocal cross wild males and virgin mutants were used. In the F1 all the flies of both the crosses irrespective of sex were normal. This suggests the spread-winged mutant is an autosomal recessive gene. In the F2 progeny both wild and mutant flies appeared in a 3:1 ratio (Table 1). Thus these results suggest that the *spread winged* mutant (*spw*) is inherited as a normal Mendelian trait. The test cross results confirm the monofactorial inheritance of the *spread winged* gene. This could be the first report of mutation in *D. malerkotliana*.

Acknowledgments: The authors are grateful to the Chairman, Department of Studies in Zoology, University of Mysore for providing facilities.

Report of E. Solé and F. Mestres. Dept. Genética, Fac. Biología, Universitat de Barcelona, 08071 Barcelona, Spain. One-winged flies obtained again in *D. subobscura*.

While carrying out lethal allelism in the population of *Centralia* (Washington) one-winged flies arose in one of the crosses. Two females and one male were found. Both females presented only the right wing and the male the left