In a large number of cases, mutations in the *rn* locus also affect gene *roughened eye* (Agnel *et al.,* 1989). C. Ma and colleagues set up a hypothesis that *roe* and *rn* are two classes of mutation of the same gene (Ma *et al.*, 1996). Our data on a new location of *roe* give indirect evidence in favour of this hypothesis. It's also possible that *roughened eye* and *rotund* are two closely linked genes. There are two major transcripts from the *rn* region: 1.7 kb and 5.3 kb (Agnel *et al.*, 1989). We suppose that $rn^{13\text{-}1}$ affects the 5.3 kb transcript which accounts for development of subdistal parts of appendages (Agnel *et al.*, 1992).

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An auditory-deficient double mutant in *Drosophila melanogaster*: $aristaless^1$; $thread^1$ (al^1; th^1).

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The aristae in *Drosophila melanogaster* contain the Johnson's organ, which is the "hearing center" of the fly (Eberl *et al.*, 1997, and references contained within). Here we report the construction of a mutant stock which has disrupted aristae morphology and function. This stock consists of mutations in the genes *aristaless* (*al*: 2-0.4) and *thread* (*th*: 3-43.2). *al* mutants have reduced-length branched aristae, and *th* mutants possess normal-length aristae with reduced branching. *al*; *th* individuals have both shorter and less branched aristae and are auditory-deficient, as demonstrated by Burnet *et al.* (1971).

To our knowledge, an *al*; *th* stock is not currently available in any public nor private stock center. We created an *al*; *th* stock by the following crossing scheme: First, al^1 (2-0.4) b^1 (2-48.5) c^1 (2-75.5) sp^1 (2-107.0) males were crossed to th^1 (3-43.2) females. F_1 males and females were then intercrossed. F_2 individuals displaying an *al; th* phenotype (but not the *b*, *c*, or *sp* phenotypes) were recovered and intercrossed, thereby combining in the F_3 *al* + + + 2^{nd} chromosomes in a *th* background.

Auditory mutants such as *al; th* have a number of potential uses. Here we briefly note two of them. First, because hearing is one of the poorest genetically characterized sensory modalities, auditory-deficient mutants may help us understand the genetic mechanisms underlying the auditory sense (*e.g.*, Eberl *et al.*, 1997). Second, since insect senses are utilized during courtship bouts and hence influence sex-specific behaviors, sensory-deficient males and females may shed light on the basis of male courtship behaviors and female choice of mates. The *al; th* double-mutant has already been studied from this standpoint: it is known to affect courtship duration (Burnet *et al.*, 1971),

courtship song (Burnet *et al.*, 1977), and male competitive mating success and female choice (Markow, 1987).

This newly-constructed al^1; th^1 stock is available from the Long Laboratory at the University of California – Irvine.

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Novel X ray induced chromosome aberrations in *Drosophila melanogaster.*

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Introduction

We have made use of the new collections of P element insertion lines (Salzberg *et al.*, 1997; Rorth, 1996) in order to induce deletions in chromosomal regions of the *Drosophila* genome not previously uncovered by deficiencies.

Material and Methods

To obtain deficiencies in specified regions of the X and 3rd chromosomes of *Drosophila*, we used stocks with P-element insertions at the following sites; 16E3-5, 16F1-4, 18D1-4, 76B5-11, 76D, 76F, 83A5-9, 83B and 98C. We used the following stocks from the European Drosophila Stock Center in Umeå, Sweden (H) and the Bloomington Drosophila Stock Center (P):

#H1 *y[1] w[1]; P{w[+mC]=lacW}l(3)S000101[S000101]/TM3, Sb[1] Ser[1]*
(*In situ* hybridization site: 83B)

#H11 *y[1] w[1]; P{w[+mC]=lacW}l(3)S000606[S000606]/TM3, Sb[1] Ser[1]*
(*In situ* hybridization site: 76D)

#H52 *y[1] w[1]; P{w[+mC]=lacW}l(3)S003108[S003108]/TM3, Sb[1] Ser[1]*
(*In situ* hybridization site: 98C)

#H1403 *y[1] w[1]; P{w[+mC]=lacW}l(3)S083207[S083207]/TM3, Sb[1] Ser[1]*
(*In situ* hybridization site: 76B5-11)

#H1437 *y[1] w[1]; P{w[+mC]=lacW}l(3)S085401[S085401]/TM3, Sb[1] Ser[1]*
(*In situ* hybridization site: 76D)

#H1573 *y[1] w[1]; P{w[+mC]=lacW}l(3)S096511[S096511]/TM3, Sb[1] Ser[1]*
(*In situ* hybridization site: 83A5-9)

#H2144 *y[1] w[1]; P{w[+mC]=lacW}l(3)S133801[S133801]/TM3, Sb[1] Ser[1]*
(*In situ* hybridization site: 76F)

#H2145 *y[1] w[1]; P{w[+mC]=lacW}l(3)S133804[S133804]/TM3, Sb[1] Ser[1]*