cover from about $^1/_{10}$ to about $^1/_5$ of the leaf area. I have not observed this type of lesion on stems, inflorescences, flowers or pods. Fertility of the SGE-1002 mutant is nearly the same as that of the parental SGE line; no aborted embryos are observed in the pods.

The SGE–1002 mutant line was crossed with its parental line SGE. All 11 F_1 plants obtained in this cross had similar easily visible dry necrotic sectors, like the SGE–1002 mutant. The following segregation was observed in F_2: 189 plants with dry necrotic sectors: 58 normal plants. This ratio does not deviate significantly from 3:1 ($\chi^2_{3:1}$ = 0.487, $0.5 < p < 0.6$).

Thus, we have a case of a dominant mutation affecting only the lamina photosynthetic structures of pea (leaflets and stipules). Dominant alleles very rarely occur in artificial mutagenesis, such as EMS or X-ray treatment, making the SGE–1002 dry necrosis mutant of special interest. This type of necrosis has not been previously described in pea. Although allelism tests have yet to be performed with *nec*, *len*, *gn*, *bulf*, *brz*, and *dgl*, I am suggesting that the mutation probably affects a new locus. Unfortunately, the location of this mutation on the pea genetic map is still unknown, but this work is in progress.

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A new mutation in pea affecting tendrils (*taa*): lateral tendrils grow at an acute angle

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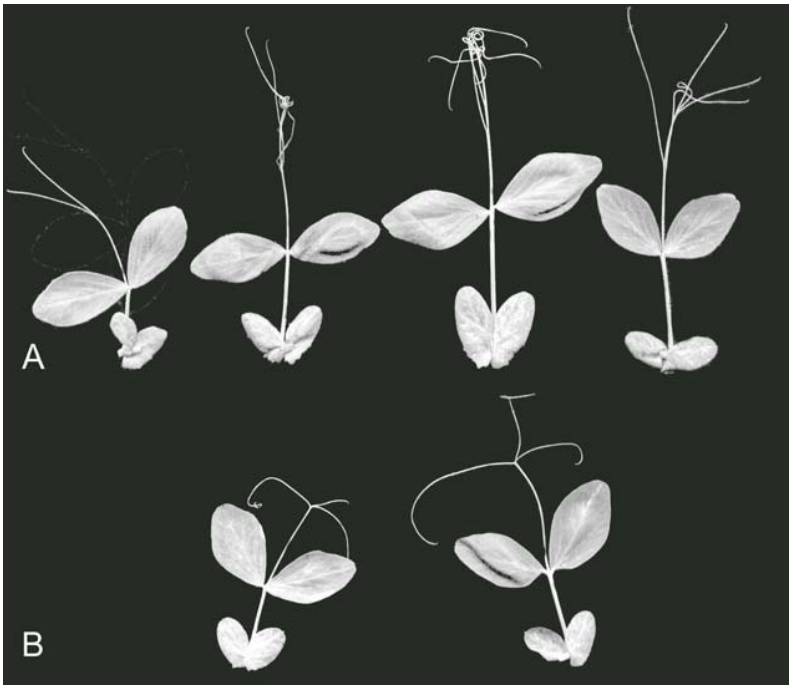
Several mutations in pea affecting tendril development have been described previously. These include the dominant gene *Twt*, that curls tendrils into compact glomerules (1,2); *bulf*, which causes the ends of tendrils to dry out (3); and two well-known homeiotic mutants, *tl* and *af*, which, respectively, transform tendrils to leaflets or vice versa (4,5).

During the screening of an M_2 progeny of the EMS-treated SGE line a new mutant SGE-0274 was isolated, characterized by an unusual form of tendrils (Fig. 1). The lateral tendril branches of this mutant



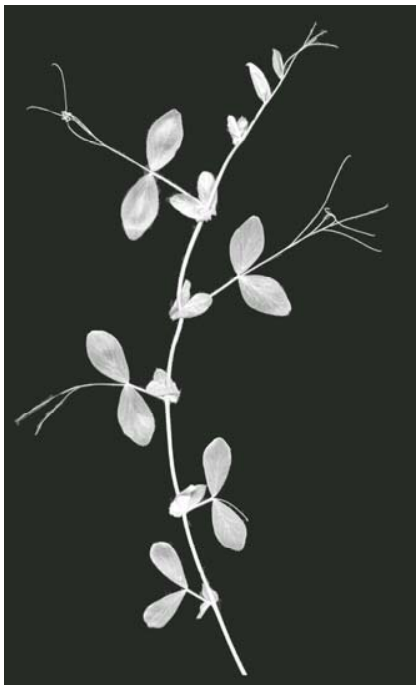


Fig. 1. (left) SGE-0274 plant. Fig. 2 (right) Leaves of the SGE-0274 mutant (A) and the leaves of the parental line SGE (B).

intersect the primary rachis at an angle of about 20 to 45 degrees, while the parent line SGE forms lateral tendril branches at a nearly right angle (Fig. 2).

As far as I know, a similar phenotype has not been described before. I suggest that a new, previously unknown locus is involved in SGE-0274 tendril formation. SGE-0274 tendrils never form a compact glomerule such as is characteristic of *Twt* plants; moreover, *Twt* is a dominant gene. The only known gene that forces lateral tendrils to grow at the angle less then 90 degrees is *af*. However, the allelic test of SGE-0274 and WL-1746 line (*af*) suggest that they are not allelic: all F_1 plants were of normal phenotype — no afila, and lateral tendrils were arranged at the right angle.

The SGE-0274 mutant phenotype was designated as the *tendrils at acute angle*, and I propose the gene symbol *taa* for it.

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