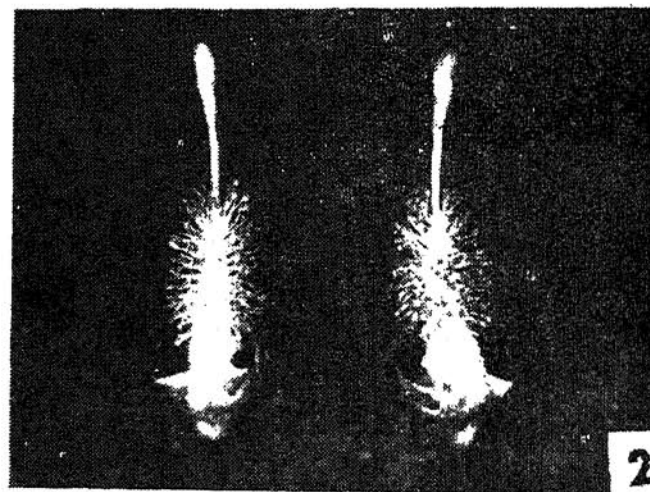
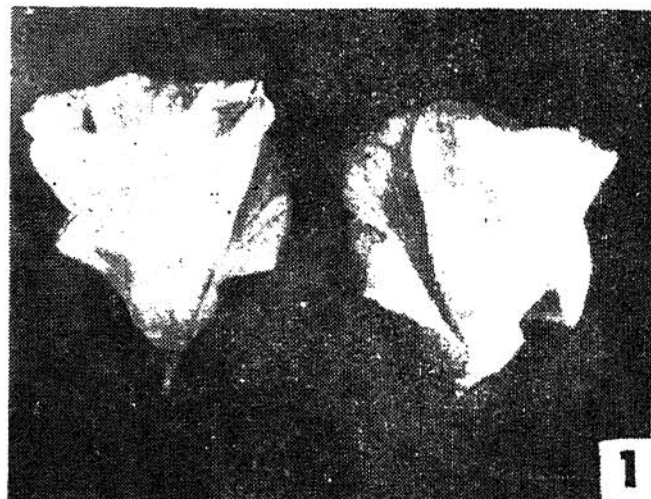


deals with isomerism in corolla of *Azanza lampas* Dalz.

The flowers of *A. lampas* are pentamerous and the five twisted petals are free to the base, where they are attached to the monoadelphous staminal tube. The individual petals are asymmetrical—a character perhaps correlated with the twisted aestivation. The petals are yellow with basal red eye and are twisted to left or right in the bud as well as in the open flower (Fig. 1). The gynoecium is pentacarpellary, superior, the stigma twisting to left or right (Fig. 2). The fruit is a capsule with 3–5 seeds in each locule.



FIGS. 1-2. Fig. 1 (left to right). Flowers showing left-handed and right-handed twisting. Fig. 2 (left to right). Staminal column with stigma—showing right- and left-handed twisting of stigma.

ISOMERISM IN FLOWERS OF *AZANZA LAMPAS* DALZ. (MALVACEAE)

THE aestivation of the corolla in species of Malvaceae^{1,2}, Bombacaceae³, Euphorbiaceae⁴, Caricaceae⁵ and Papilionaceae⁶ is distinctly twisted either to left or right in bud. In most cases this condition persists even after the opening of the flower. It has been reported that many species of Malvaceae, show the petals twisted in clockwise (left-handed or levorotatory) and counter clock-wise (right-handed or dextro-rotatory) fashion^{1,2}. This left- and right-handedness in any plant organ is referred to as bioisomerism⁷. Bioisomerism or isomerism is known to occur in different plant organs^{5,8}. The present communication

Numerical data regarding the handedness of corolla in 15 plants were collected on plants grown in Botanical Gardens, M.S. University, Baroda. The data are presented in Table I and shown in Fig. 1. It may be seen from the table that out of 15 plants examined 10 show excess of left-handed flowers, while the rest show more of right-handed flowers. *A. lampas* like other Malvaceae species² also show more of left-handed flowers. On the whole, the left-handed flowers account for 53.78% of the total flowers examined as compared with the right-handed flowers (46.22%). The χ^2 (5 d.f.) value is 2.503, which is insignificant.

TABLE I

Plant Number	Flowers with right-handed corolla	Flowers with left-handed corolla	χ^2 (for 1 : 1 deviation)
1	23	27	0.320
2	08	07	0.070
3	14	21	1.400
4	19	13	1.120
5	17	15	0.130
6	11	15	0.620
7	12	16	0.570
8	19	14	0.760
9	17	21	0.420
10	14	10	0.660
11	05	12	2.880
12	12	19	1.580
13	07	08	0.060
14	11	16	0.920
15	12	20	2.000
Total	201	234	2.503

The stigma lobes like corolla lobes also show handedness as reported in *Carica*⁵. In *A. lampas* the left-handed flowers have right-handed twisting and vice versa (Fig. 2). These observations are different from those on *Bombax ceiba* and *Thespesia populnea*¹, wherein twisting of stigma lobes is in accordance with the contortion of petals.

In *A. lampas* the comparison of the size of the pollen grains (122.40 μ and 121.10 μ in left- and right-handed flowers) and pollen viability (98.30% and 99.16% in left- and right-handed flowers) do not show any significant variation in left- and right-handed flowers. These observations differ from earlier reports on Bombacaceae⁶.

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Plant Breeding and Genetics Section,
 Central Sericultural Research and Training Institute, Srirampura,
 Mysore 570 008.
 and

Department of Botany, Faculty of Science,
 M.S. University,
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