## LIST OF FIGURES,

| Chapter | Figure | Capti | After |
| :---: | :---: | :---: | :---: |
|  | Prore | Caption | pag |
| I | 1.1 | Somatic chromosomes from a root tip cell showing $2 \mathrm{n}=18$ (X1500). | 20 |
|  | 1.2 | Idiogram of the somatic complement of Passiflora incarnata L. | 21 |
| II | 2.1 | Premetaphase : O-banded somatic chromosomes (X3500). | 29 |
|  | 2.2 | Metaphase : O-banded somatic chromosomes. | 29 |
|  | 2.3 | Metaphase : O-banded somatic chromosomes. | 29 |
|  | 2.4 | Premetaphase : Frypsin-orcein banded somatic chromosomes. | 36 |
|  | 2.5 | Metaphase : Trypsin-orcein banded somatic chromosomes. | 36 |
|  | 2.6 | Premetaphase : Giemsa banded somatic chromosomes. | 42 |
|  | 2.7 | Metaphase : Giemsa banded somatic chromosomes. | 42 |
|  | 2.8 | Metaphase : Giemsa banded somatic chromosomes. | 42 |
|  | 3.1 | Fig. 3.1 a, b, and c showing Bridges. | 47 |
|  | 3.2 | Fig. 3.2 a, and b showing Laggards. | 47 |
|  | 3.3 | Fig. 3.3 a to h showing Univalents. | 48 |
|  | 3.4 | Fig. 3.4 a and b showing abnormal bivalent association. | 49 |

3.5 Fig. 3.5 showing abnormal Metaphase ..... 49 I and anaphase I.
3.6 Fig. 3.6 - Telophase II showing ..... 49 cytomixis and unequal distribution of chromosomes.
3.7 Fig. 3.7 showing Micronuclei formation. ..... 49
IV 4.1 l-type flower ..... 592-type flower3-type flower
V 5.l Photographs showing the morphological ..... 69variations due to colchicine treat-ment.
5.1 Reduced growth. ..... 69
5:2 Curling of the leaves. ..... 69
5.3 Thickness of the leaves increased. ..... 69
5.4 Camera lucida drawings of the stomata ..... 70of diploid and tetraploid . incarnata.
5.5-5.6 Morphological anomalies in colchicine ..... 71 ( $0.2 \%$ ) treated plant (withcoloured contrast).
5.7-5. 10 Photographs showing the morphological ..... 78 variations due to various concentra- tions of DES treatment on P. incarnata
5.11 Camera lucida drawings of the stomata ..... 79of $\underline{P}$.incarnata treated with variousconcentrations of DES.
5.12-5.16 Photographs showing the morphological ..... 80variations due to various durationsof MNNG treatment on P.incarnata.
5. 77 Camera lucida drawings of the stomata ..... 81of P . incarnata treated with variousdurations of MNNG.

