

| PLATE NO. | LIST OF PLATES                                                                                                              | PAGE NO. |
|-----------|-----------------------------------------------------------------------------------------------------------------------------|----------|
| III.1     | Well developed microfolds ( $F_1$ ) in cordierite - garnet - sillimanite - gneissic granulites (Loc. Harivav, N. of Danta). | 24       |
| III.2     | Quartzofelspathic veins showing minor folding ( $F_1$ ) cordierite - biotite- gneisses on way to Danta - Ambamata road.     | 24       |
| III.3     | $F_2$ trend in folds in biotite gneisses (Loc. Piplavali Vav, N. of Danta).                                                 | 26       |
| III.4     | Contact of amphibolites with biotite gneisses (Loc. Ambamata, S. of Danta).                                                 | 26       |
| III.5     | Calcgneisses showing steep dips (Loc. Kanbiavas, NE. of Danta),                                                             | 29       |
| III.6     | A close up view of $F_2$ folds in calcgneisses (Loc. Vajapur, SE. of Danta).                                                | 29       |
| III.7     | Calcgneisses showing $F_2$ , $F_3$ folds near Kuvarsi.                                                                      | 31       |
| III.8     | Quartzveins in massive amphibolites (Loc. Jasvantgarh, S. of Danta).                                                        | 31       |
| III.9     | Ptygmatically folded quartzvein in amphibolites on way to Danta - Kanbiavas road.                                           | 35       |
| III.10    | A close up view of boudinage structure in amphibolites (Loc. N. of Kanbiavas).                                              | 35       |
| III.11    | Rhythmic layering in metagabbros (Loc. Nedardi, SE. of Danta).                                                              | 37       |
| III.12    | Characteristic Tor' weathering in granites near Divri.                                                                      | 37       |
| IV.1      | Swirling mats of acicular sillimanite within the cordierite in cordierite garnet sillimanite gneissic granulites (XN, X70). | 45       |
| IV.2      | Cordierite showing polysynthetic twinning in cordierite - garnet - sillimanite - gneissic granulites (XN, X70).             | 45       |
| IV.3      | Cordierite exhibiting sectoral twinning in cordierite - garnet - sillimanite - gneissic granulites (XN, X70).               | 46       |

|       |                                                                                                   |    |
|-------|---------------------------------------------------------------------------------------------------|----|
| IV.4  | Photomicrograph showing symplectite structure along the fringes of cordierite - quartz (XN, X70). | 46 |
| IV.5  | Photomicrograph showing poikiloporphroblastic nature of almandine (garnet) (PPL, X70).            | 48 |
| IV.6  | Sillimanite showing well developed basal parting (PPL, X70).                                      | 48 |
| IV.7  | Felspar showing twinned and untwinned grains in biotite gneisses (XN, X70).                       | 50 |
| IV.8  | Photomicrograph showing biotite developed across the foliation (PPL, X70).                        | 50 |
| IV.9  | Photomicrograph showing gneissic bands with increase of quartzofelspathic material (XN, X70).     | 53 |
| IV.10 | Photomicrograph showing abundance of biotite and k-felspars (XN, X70).                            | 53 |
| IV.11 | Textural characteristics of calcgneisses (XN, X70).                                               | 56 |
| IV.12 | Granoblastic texture in calcgranulites (XN, X70).                                                 | 56 |
| IV.13 | Well developed scapolite with inclusions of apatite, rutile and zircon. (XN, X70).                | 58 |
| IV.14 | Photomicrograph showing rutile needles in quartz in calcgranulites (XN, X70).                     | 58 |
| IV.15 | Textural characters of marbles (XN, X70).                                                         | 62 |
| IV.16 | Photomicrograph showing orthocumulate-adcumulate structure in metagabbros (XN,X70).               | 62 |
| IV.17 | Photomicrograph showing triple junction in metagabbros (PPL, X70).                                | 64 |
| IV.18 | Hypersthene showing inclusions of rutile needles (PPL, X70).                                      | 64 |
| IV.19 | Photomicrograph showing biotite inclusions in pyroxenes in metagabbros (PPL, X70).                | 66 |
| IV.20 | Photomicrograph of prismatic sections of hornblende in metagabbros (PPL, X70).                    | 66 |

|        |                                                                                          |     |
|--------|------------------------------------------------------------------------------------------|-----|
| IV.21  | Hornblende granulite showing inclusions of apatite needles within hornblende (PPL, X70). | 68  |
| IV.22  | Hornblende exhibiting crescent shaped bits in hornblende granulite (PPL, X70).           | 68  |
| IV.23  | Migmatized amphibolites showing quartzfelspar rich layers (XN, X70).                     | 76  |
| IV.24  | Vermicular or myrmekitic intergrowth of quartz and felspar in granites (XN, X70).        | 76  |
| VII.1  | Field photograph showing fold mullions in calcgneisses (Loc. Kanbiavas).                 | 139 |
| VII.2  | Field photograph showing refolding (flow folding) in calcareous rocks (Loc. Kuvarsi).    | 139 |
| VII.3  | Stratiform foliation in calcareous rocks (Loc. Divri).                                   | 152 |
| VII.4  | Field photograph showing drag folds in calcareous rocks (Loc. Piplavali Vav).            | 152 |
| VII.5  | Field photograph showing synchronous refolding in calcgneisses (Loc. Vajasan).           | 155 |
| VII.6  | Calcgneisses showing flexural slip (flow) foldings. (Loc. Vadvera).                      | 155 |
| VII.7  | Well developed concentric folds in calcgneisses (Loc. Vajapur).                          | 158 |
| VII.8a | Field photograph showing various shapes of folds in calcgneisses (Loc. Vajapur).         | 158 |
| VII.8b | Field photograph showing various shapes of folds in calcgneisses (Loc. Kantivas).        | 159 |