erable thickness of Cambrian and a comparatively small amount of Lewisian, the upper nappe consists largely of Lewisian with only a thin veneer of Cambrian sediments. Thus the upper nappe must have been derived from a lower stratigraphic level than the lower nappe.

FOLDING

Small-scale folds are uncommon in the zone of dislocation; the only examples I observed are in the phyllonitic rocks along the Assynt (Glencoul) thrust, south of Loch Glencoul (pl. 5, *a*). Six folds were recognized within 2 feet of the thrust plane. The trend of the folds varies between N. 10° W. and N. 15° E. The folds are asymmetrical and overturned toward the west, and the style is less "plastic" than in the primary mylonitic rocks along the Moine thrust.

Medium-scale folds are locally developed in the limestones and the dolomites; the folding of the Loch Ailsh dolomites has already been described, and folds of similar size and style are developed in the calcareous rocks near the sole in the southern part of Assynt. The orientations of these folds at two localities, south of Knockan village and at Knockan Crag, are shown in figure 20 (in pocket). The fold axes plunge at low angles to the southeast, and the folds are overturned to the southwest.

There is considerable large-scale folding of the Cambrian and Torridonian sediments in both the upper and lower nappes, and at several localities the rocks are sufficiently well exposed to show the form of the folds. The orientation of the bedding surfaces over several of these folds was measured, and β-diagrams were constructed to determine accurately the orientation of the fold axis (fig. 20, areas II, IV, V, XII, XIV, XVI, XIX, XXII, XXIII, XXVI). Certain other areas of Cambrian and Torridonian rocks, in which the form of the folds is not evident, were examined, and β-diagrams were also constructed for these areas. The majority of the areas were found to be homogeneous with respect to the fold axis (β), but a few are heterogeneous. Heterogeneous areas may be broken down until they are resolved into a number of smaller homogeneous areas, so that the variation of the fold axis (β) within the larger area may be visualized. The homogeneity of the smaller areas may be tested, if necessary, by means of partial diagrams. Two of the areas studied (XI, XXV) were found to be divisible into two subareas, each with a single fold axis (β); in each instance the trend of the β-axis in one of the subareas is easterly and in the other northerly. Several of the other areas shown in figure 20 are not completely homogeneous, but a thorough analysis of the folding in these areas was not possible.

In all the areas shown in figure 20 there is a single strong maximum in the β-diagram, which, even in areas with slight inhomogeneity, approximates to the fold axis. The orientation of the β-axes in the areas examined is shown in the synoptic diagram (figs. 20, 24). The axes fall into three groups, one with northerly trend (β_n) and the others plunging to the east (β_e) and the southeast (β_{se}).

DISTRIBUTION AND STYLE OF LARGE-SCALE FOLDS

Folding about southeast-trending axes, generally on a large scale, is found in both the lower and upper Assynt nappes. In the lower nappe the limestones near the sole are folded at the southeast end of Loch Assynt (fig. 20, in pocket, XII),

on the Stronechrubie plateau (XIX), and in the neighborhood of Knockan. The large-scale folds at Loch Assynt and Stronechrubie are open and asymmetrical, with the steeper limbs dipping to the southwest (pl. 7, *b*); the medium-scale folds near Knockan are recumbent and more tightly compressed but are also overturned to the southwest. The Cambrian quartzites east of Glenbain (fig. 20, XVI, XVII) are folded into an immense asymmetrical anticline with the steeper limb again dipping to the southwest, similar to the large anticlines in the limestones; the exposure of basal quartzites in the core of the anticline gives rise to the elongate outcrop which is clearly seen on the Assynt sheet.

Visible folding about north-trending axes is widespread in the zone of dislocation, but the most spectacular folds are found in the central part of the zone, at short distances from the outcrop of the Ben More thrust. Folding of the quartzites east of the thrust at Gorm Loch Mor and Na Tuadhan has already been noted (pls. 6, *b;* 7, *a*). South of the latter locality, on the north slopes of Ben More (fig. 20, XXI), folding of a similar type is present, and on the south side of Conival, immediately east of the Ben More thrust, the Torridonian rocks are also folded into a syncline with north-trending axis (fig. 20, XXII). Still farther to the south, in Coirean Ban, west of the river Oykell, another large anticlinal fold is exposed near the supposed outcrop of the thrust. The most intense folding about north-trending axes is found a short distance to the west of the thrust, on the ridge formed by Braebag, Creag Liath, and Meall Diamhain (fig. 20, XXIII, XXVI). Much of this ridge is scree-covered, so that the exact form and extent of the folds is difficult to determine, but the approximate distribution of the folds is shown in figure 20.

The folds in this group are of variable style, but they are generally open and commonly asymmetrical, the steeper limbs dipping toward the west. They are associated with shear surfaces and reverse faults, which dip to the east, subparallel to the Ben More thrust (pl. 7, *a*). It may be inferred from the limited distribution of the folds and their close relationship with shear surfaces parallel to the Ben More thrust that the folding and the faulting were produced by the same movements as the thrust.

The relationship between the southeast- and north-trending folds is evident in the Ben Uidhe area. The southeasterly folds between Glasven and the Mullach an Leithaid Riabhaich are transected by a considerable number of eastward-dipping reverse faults; in the vicinity of these faults the near-horizontal beds are bent and locally folded about north-trending axes. Thus the north-trending folds and the eastward-dipping reverse faults (including the Ben More thrust) must obviously have been produced during a later phase of deformation than the southeast-trending folds.

LINEATIONS

Penetrative lineations are not developed in the zone of dislocation, except in the vicinity of the Moine thrust, where the rocks have been affected by the penetrative "Moinian" deformation. Slickensides on bedding planes and shear surfaces are, however, comparatively common. The most intense lineations of this type were observed on shear surfaces in the Cambrian quartzites on Ben Uidhe and near the summit of Ben More. At both these localities the shear surfaces dip