The Acadian Forest Region

South of the gulf of St. Lawrence, Canada extends out into the Atlantic ocean in a series of irregular peninsulas and islands. Of these, Prince Edward Island and the greater part of New Brunswick and Nova Scotia are occupied by the Acadian Forest Region, which extends southwestward along the Appalachian System into the United States to occupy increasingly higher altitudes.

The Forest is related to the Great Lakes–St. Lawrence Forest, the dominant conifers of which —hemlock, white pine, and red pine—are well distributed; to the Deciduous Forest, in possessing the so-called northern hardwoods—sugar maple, yellow birch, and beech (which also occur within the former forest)—and to the Boreal Forest through the presence of white spruce and balsam fir. The characteristic dominent is, however, the red spruce, which is confined to this region and extends throughout it.

All the area in Canada considered under this Forest Region is included by Clements as part of the Boreal Forest. This does not seem in keeping with the distribution of vegetation and the climatic conditions. John Macoun, an outstanding Canadian botanist, after examination of Prince Edward Island and part of Cape Breton Island, states definitely that there is no boreal character to the vegetation (25). This is substantiated by the later work of Dr. Fernow in Nova Scotia (11). Furthermore, several more of the associated Deciduous Forest species of the Great Lakes–St. Lawrence Forest, such as elm, butternut, white ash, silver and red maples, and red oak, are found within the region, and wire birch is more or less confined to it and adjacent portions of the Forest.

It is evident that during glacial times the original forests suffered a fate similar to that of the forests of the Great Lakes–St. Lawrence Forest Region, being forced against the Deciduous Forest Region along the higher levels of the Appalachians and in large part destroyed by a following Boreal invasion. Clements points out that because of the lower altitude of these mountains when compared to the western ranges only one or two species were differentiated, one of these being presumably the red spruce (37). It is probable that in view of the Boreal antecedents of this species and the presence of such Boreal invaders as the white spruce, balsam fir, and the ubiquitous aspen and white birch, he has placed this area in question with the Boreal Forest and classes the Great Lakes–St. Lawrence Forest dominants as relict species.

[1] Note.—Since the above was written an article by G. E. Nichols has come to hand, entitled "The Hemlock, White Pine, Northern Hardwoods Region of Eastern North America" (Ecology, Vol. XVI, No. 3, 1935). The essential unity of the region is demonstrated, good agreement is shown with its amended range in this work, and the importance of the northern hardwoods is well brought out.

In the matter of climate, there is a considerably higher precipitation—in general over 40 inches, the bulk of which falls during the winter months—and a higher temperature than that found within the Boreal Forest.