vated fish (such as Gambusia), Pteridium aquilinum (bracken fern), and members of the Compositae and Graminae. A recent international symposium considered many aspects and species (see Genetics of Colonizing Species, published by the Academy Press in 1965; edited by H. G. Baker and G.L. Stebbins). A working conference is recommended to select species for study and to plan investigations of why certain species have spread more widely than others.

2. Polar and alpine species of plants and animals. International cooperation could broaden the base for studies of widespread high-latitude and high-altitude species.

3. Tropical species. An active program conducted in cooperation with stations and organizations in the American tropics is particularly recommended. It should include and effort to understand the enormus diversity of species in the tropics and their often relatively small populations and narrow ranges.

4. Estuarine and marine species. Limiting factors, isolating mechanisms, and physiological adaptations for marine species are poorly known. Many estuarine plants and animals occur in gradients of salinity, temperature, and dissolved oxygen which may be relatively stable or may vary tidally. Some marine and estuarine organisms occur with or without species replacement over geographic ranges where environmental gradients are marked. Comparison of individuals from populations of the same or related species in different locations may elucidate physiological factors in distribution, abundance, and speciation.

Measurements of adaptive functions should be made in many places. They should be made on populations of special advantage which should be chosen after a working conference.