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THE IMPORTANCE OF COLLECTING—NOW

FREDERICK H. RINDGE

The American Museum of Natural History, New York, N. Y.

During the past few years there has been more and more concern about the forthcoming "population explosion"; the current estimate is that the world's population will double its present figure before the end of this century, just a short 35 years from now. This means that there will be a daily increase of 160,000 people, or 110 babies every minute—the equivalent of 10 football teams. If no steps are taken to slow down this avalanche of humans, by the year 2050 there will be only one square yard of dry land per person on the earth. You may hope that these figures may apply only to Asia, Africa, or Latin America—that they can't apply to this country. This is just wishful thinking on your part.

How will this tremendous expansion effect the land upon which we live? Much more food will be needed to feed these hordes; this means more land under cultivation. Some of this will have to be carved out of forests. Many forests throughout the world are being ruthlessly destroyed for their raw materials. The results—loss of the protection of watersheds, the prevention of floods and erosion—can be seen in countries such as Greece, Yugoslavia, Jordan, Syria, and Chile, where the land is completely deforested and eroded down to bare rock. Some marginal land is used for grazing by cattle and sheep; unless care is taken to prevent overgrazing, these areas will turn into worthless semideserts.

With increased agricultural uses, there is a much greater use of pesticides and herbicides—and their effects, unfortunately, are not always restricted to the fields for which they are intended.

You all know from experience how many more automobiles there are today than there were just a few years ago, and are acquainted with some of the problems arising therefrom. Smog, plus many more industrial plants, are producing a steady increase in the carbon dioxide content of the air. This produces a heat blanketing effect, which is gradually raising the earth's mean temperature. Consequently this may cause a gradual melting of the polar ice caps, raising the levels of the oceans, thus flooding the low-lying coastal areas of all the continents. This is another factor that will reduce the amount of dry land.

Increased housing will be needed to shelter all the people, which takes still more land. By the end of this century there will be a solid procession of cities and suburbs from Boston to Washington; much of southern California is rapidly approaching this condition. In fact, in the United States alone one million acres per year are gobbled up by urban sprawl, roads, industry, and the like.

All of the above factors are having their effects on the land—undisturbed habitats for collecting are rapidly getting fewer and farther between. This is happening throughout the country, as a glance at the last seasonal summary in the *News of the Lepidopterists' Society* will reveal. Some of the expressions from that publication are as follows: "urban sprawl continues to encroach on collecting areas; the native flora is rapidly being deleted; too much crop spraying; the area where the largest colonies are located will soon be destroyed due to the construction of a new super highway; the recently discovered habitat has been wiped out by a recreation center." I'm sure you will have had experiences along these lines.

Obviously this trend is going to continue, and it will be accelerated. It is, therefore, of vital importance to do as much intensive collecting and life history work in as many places as possible, and to start as soon as possible. Only in this way will future generations of entomologists have access to actual material and knowledge of the species which occurred during the last half of the twentieth century. As you know, several butterfly populations have already been wiped out here in California as well as elsewhere, and others are in grave danger of undergoing a similar fate. Because we cannot halt the spread of "civilization" we should collect adequate series of as many species of butterflies and moths as possible while they are still in existence.

To make a collection of lasting value, all specimens should be correctly mounted and labeled before being added to the collection. It is of great importance that really complete locality data be given on each label. By next year your favorite collecting area may no longer exist as such—