some of the difficulties about as well as can be expected.

As a basis I have taken four terms in general use that have (in my opinion) become more or less established in use and concept:

Abundant.
Common.
Scarce.
Rare.

Of course none of these terms can be defined by absolute numbers or density of population per unit of area. An equal number of song sparrows and golden eagles in a given territory would make either the former decidedly "rare" or the latter phenomenally "abundant." Therefore, in defining the terms I have tried to measure them by their effect upon the observer and not by the numerical occurrence of individuals. This, of course, has the objection of accentuating personality somewhat, but it follows the usual conception of the terms, and, if followed consistently, will make all observations of one recorder comparable with each other while affording some degree of uniformity between those of different observers.

Common.—This is the fundamental or zero of the system and all other terms must from time to time be compared with it. It is applied when individuals are noted in such numbers as to be readily found without special search. The test of commonness is when the observation of an individual, more or less, arouses little or no interest. When the observer passes by with the mental thought, "another song sparrow," and then dismisses the matter from the mind, the species is "common."

Abundant is applied when the species intrudes itself upon the senses so repeatedly that one can not help noticing it. In other words, when it is practically always present. The test for abundance is when the observer notes the numbers with a certain amount of interested surprise, and the mental ejaculation is "What! another song sparrow?"

Scarce.—Considerably less than "common." The test of scarcity is when the sight or observation of an individual arouses more or less passing interest and self congratulation. The accompanying thought might be expressed as, "Good! another song sparrow."

Rare.—Decidedly less in number than "scarce." The test is when the appearance arouses decided enthusiasm and a thought arises such as, "Hurrah! here is a song sparrow."

With each of these terms I should advise using qualifying adverbs such as "very" and "rather"; thus we have "very rare," "rare" and "rather rare"; "very common," "common" and "rather common," etc.

Irregular, or its adverbial form "irregularly," denotes fluctuation of number at different times.

Local or Locally denotes variability in geographical distribution.

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"FLORIDA WEATHER"

IN reading Mr. A. H. Palmer's remarks on "Winter Weather in Florida" in the issue of SCIENCE for May 31, one wonders what unfortunate circumstances accompanied his experiences with Florida weather or whether he ever spent a winter in the state. One must believe from his remarks that in his opinion he has really discovered something about the climate of Florida not hitherto known.

While we do not question the accuracy of the official records he quotes, they are so arranged as to give an impression that is far from accurate. For instance, one would be led to infer that while California escaped the frosts of the past severe winter practically unscathed, Florida suffered severely; whereas the facts of the case are exactly the reverse of this. This false impression arises largely from his comparing northern Florida with the coast region of central and southern California, a comparison that is manifestly unjust. He deliberately chooses the coldest part of Florida (the record of —2 was at Tallahasse, although he does not say so in his article) for comparison with the warmest parts of California.

One would further gather the impression that while the citrus industry of California is beyond danger, that of Florida is liable to be wiped out completely. While it is true that the freeze of February, 1895, killed a large part of the orange trees to the ground, the few groves then existing in the southern part of the state, where citrus planting is now most active, largely escaped, and most of the groves further north have long been in bearing again. In other words the grower of citrus has learned what Mr. Palmer has not learned, *i. e.*, that there is a difference in climate between northern and southern Florida, and has accordingly shifted the center of the industry a hundred miles further south. He has further learned to copy the methods of the California grower in being prepared to heat his grove in case of need.

As to the frost at Miami, the author knows from personal observation that tomatoes were not injured and every gardener knows that a frost that will not kill tomatoes does not cut much of a figure. Furthermore the temperature given for San Francisco and Los Angeles (42) is perilously near the danger point for frost, a fact that Mr. Palmer fails to mention.

While every night may not be a "June" night, in the writer's opinion our coldest days, even in this part of the state, so far as personal comfort is concerned, compare very favorably with some "June" days he has experienced on the shores of Lakes Erie and Michigan.

One should not attempt to draw conclusions as broad as his on such limited data. Figures of minimum temperatures, although valuable, fall a long way short of telling the whole story as to the desirability of a state as a winter resort. The average temperature during daylight, for instance, is a point much more important.

I am impelled to write this protest because of the amount of harm such an unjust article can do to a community.

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SCIENTIFIC BOOKS

The Mechanics of the Aeroplane. A Study of the Principles of Flight. By Captain Duchene. Translated by Ledeboer and Hubbard. Longmans, Green & Co. 1912. 231 octavo pages, 91 diagrams, 4 tables in the text and 5 in the appendix.

This is an elementary technical work on the principles of the aeroplane. It is neither accurate enough nor comprehensive enough to be called a popular treatise. It presents in rough and ready practical form the latest results of theory and experience, and therefore should prove welcome to engineers who practise aviation professionally, rather than investigate profoundly or precisely.

It is divided into four parts aggregating six chapters. The first part treats of flight in still air; the second part treats of equilibrium of the aeroplane in still air; the third discusses the effect of the wind on the aeroplane; the fourth presents one chapter on the theory and design of the screw propeller. In all the text care is taken to preserve the theoretical nature of the work, and not to cumber it with descriptions of machines, details of construction, or historical references.

The work would be improved by eliminating certain misleading passages. Thus the author states that the wind force on a plane at small angles of incidence is almost normal to the surface, whereas it is well known that the force may be very oblique at small angles, being actually tangential to the surface at zero incidence. Again he states that many constructors design their propellers with a curved leading edge because the streaky marks on the propeller-blade made during rotation, by dust particles and oil, assume this shape. As the author presents without protest or repudiation this absurd reason of the practical designer, the reader naturally infers that the author either endorses the absurdity or suspends judgment. One skilled in aerodynamics can not entertain such a reason for curving the leading edge of a propeller blade.

On the whole the book is a good presentation of the most advanced information on the