did not exceed 13,000—a figure substantially below the 1941 (peacetime) goal of 18,600.

With these cautions, the data from the 1941 plan are presented as rough approximations of the breakdown by *undergraduate* fields (Table 1).

In summary, substantial evidence is available from Soviet official sources to indicate a rapid rate of increase in that country's professional labor force in recent years. Furthermore, it is likely that the data presented are considerably under the actual totals, for I do not believe that military institutions, which play an important role in Soviet higher education and research, are included. As a whole, this qualitative improvement of the Soviet labor force opens up possibilities of profound new developments in science, technology, and other fields. It is a phenomenon that permits of no complacence on the part of the West.

DEMITRI SHIMKIN

Russian Research Center
Harvard University

Perfection and Ideality

IN A paper now being published by the Willow Run Research Center,[1] we have included the following definitions in the glossary:

Perfect gas—one which conforms to the state equation $P = \rho RT$.
Ideal gas—a perfect gas which has constant specific heats.

In theory, assumptions that lead to perfection may also lead to ideality. In practice, however, these concepts are used for purposes of approximation, and derivations often make use of the one approximation without wishing to imply the other.

The advantage in scientific writing of having words with precise meanings is, of course, well known. The terms "perfect gas" and "ideal gas" have long been used interchangeably, with little regard for which of the above two definitions is meant. I should like to recommend consideration of the general adoption of these definitions.

ROBERT E. MACHOL

Willow Run Research Center
Engineering Research Institute
University of Michigan, Ypsilanti, Michigan

[1] UMM 97, a shock tube investigation of detonative combustion, by R. B. Morrison.

Age of the Denbigh Flint Complex[1]

THE Denbigh flint complex (*1*), the oldest well-known cultural horizon in Alaska, has aroused widespread interest and speculation as to its antiquity (*2, 3*). This fact makes desirable a preliminary notice of results obtained in geologic investigations at Iyatayet, the discovery site. The geologic significance of several related sites in the Brooks Range also needs clarification.

[1] Publication authorized by the Director, U. S. Geological Survey.

Iyatayet, the site of excavations by J. L. Giddings, Jr., is located on the west coast of Cape Denbigh on Norton Bay, 115 miles east of Nome, Alaska. Evidence from topographic features, sediments, soils, and cultural deposits indicates that people of the Denbigh flint complex occupied Iyatayet Valley during a warm interval preceded and followed by intervals when the climate was colder than at present. The warm interval during which the site was first occupied probably coincided with a warm interval about 8500 years ago, recorded by dated muck north of Nome; but it may have coincided instead with an older, pre-Mankato warm interval more than 10,000 years ago, represented by dated muck near Fairbanks.

Cultural objects belonging to the Denbigh flint complex have been collected on glacial deposits at three sites in the Brooks Range in northern Alaska (*4, 5*). According to Solecki (*5*), "the fact that these early manifestations were found in glaciated areas conclusively points out that these sites were occupied during post-glacial times." However, several distinct ice advances, each less extensive than its predecessor, are recognized in the Brooks Range (*6*). None can be dated at present. The glacial sediments upon which objects of the Denbigh flint complex were found may have been deposited during a relatively early advance, and examination of air photos suggests that this is the case in at least one of the sites. On the basis of present knowledge, therefore, it can only be said that the Brooks Range sites are younger than an early glacial advance; they are not necessarily younger than the latest Pleistocene glacial advance.

Giddings and I have in preparation a manuscript describing in detail the results of geologic investigations at Iyatayet.

DAVID M. HOPKINS

U. S. Geological Survey
Washington, D. C.

References

1. GIDDINGS, J. L., JR. *Am. Antiquity*, **16**, 193 (1951).
2. COLLINS, H. B. Smithsonian Publ. No. 4041, 460 (1950)
3. SOLECKI, R. S. *Sci. American*, **184**, 14 (1951).
4. IRVING, W. *Am. Antiquity*, **17**, 52 (1951).
5. SOLECKI, R. S. *Ibid.*, 55.
6. DETTERMAN, R. F. Personal communication.

Common Names for Subspecies

AS AN amateur ornithologist, albeit professionally a taxonomic botanist, I must endorse wholeheartedly the plea voiced by Howard Campbell in SCIENCE for June 6.

There has recently been an epidemic of subspecific common names in ornithology, along with many proposed changes of specific common names, some of which—e.g., gray jay for Canada jay (*Perisoreus canadensis*)—seem to serve no useful purpose. Some lists of proposed names have been published and have been followed in varying degrees by many bird clubs, sometimes with an astonishing degree of confusion. For three years I undertook to prepare Christmas bird census lists for publication in the *Canadian Field-*