ciety of London, the council, according to the *Times*, London, reported that the number of visitors to the Gardens during the past three months was 629,227 and receipts for admission amounted to £30,091. The total number of visitors during the year up to the end of October was 1,313,821 and the receipts amounted to £56,030, showing an increase of £39,504 compared with the corresponding period of the previous year and of £14,203 compared with the average for the previous five years. The number of visitors to Whipsnade Park during the year up to the end of October was 99,510 and receipts amounted to £4,581, showing a decrease of £5,322 compared with the corresponding period of the previous year.

DISCUSSION

SEVERITY OF NARCISSUS BASAL ROT INCREASED BY THE USE OF SYNTHETIC HORMONES AND NITROGEN BASES

COMMERCIAL bulb growers have recently become interested in the possibility of using growth-regulating substances to obtain increased flower and bulb production as well as disease control. Several materials purporting to accomplish these objectives are now on the market. The effect of a number of such compounds on narcissus bulbs, variety King Alfred, has been studied at the Bureau of Plant Industry Station, Beltsville, Maryland, during the past two years. Included in these studies have been naphthalene acetamide, indolebutyric acid, indoleacetic acid, naphthaleneacetic acid, uric acid, guanidine and allantoin. Before planting in the fall some bulbs were dipped in solutions containing 10 to 100 p.p.m. of these compounds, others in talcum powder containing 1 to 10 parts of these compounds in 5,000 parts of talcum. Several thousand bulbs were planted in suitably replicated plots. In every trial the application of the hormones or nitrogen bases increased the amount of basal rot over that in comparable untreated bulbs. Bulbs apparently healthy were treated after harvest with several of the above-named compounds and developed a significant increase in the amount of basal rot during storage.

In laboratory studies the addition of naphthalene acetamide, indolebutyric acid, allantoin, uric acid and adenine sulfate stimulated the growth of *Fusarium oxysporum* f. *narcissi* (Cke. et Mass.) Sny. and Han., the causal organism of basal rot. This is believed to be the first report of stimulation of a plant pathogen by a synthetic growth-regulating substance of the hormone type or by a nitrogen base. Data presented in a paper by Greathouse and Rigler[1] seem to indicate that increased growth of *Phymatotrichum omnivorum* (Shear) Duggar occurred when xanthine and adrenaline were added to the nutrient solution. At the Buffalo, New York, meeting of the American Chemical Society in 1942 Martin and Fisher reported that adenine increased the virulence of *Escherichia coli*.[2]

Further studies on the effect of synthetic hormones and nitrogen bases on growth and pathogenicity of the basal-rot pathogen and other organisms are in progress and a more extensive report will be presented elsewhere.

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1 Glenn A. Greathouse and Neil E. Rigler, *Phytopath.*, 30: 475–485. 1940.

2 Gustav J. Martin and C. Virginia Fisher, *Abstracts*, American Chemical Society meetings, 28B, 1942.

WHAT IS A GENERIC NAME?

RECENT discussion in this journal on the use of generic names has surprised and puzzled some of my colleagues and me. Certain scientists appear to be exercising a remarkable ingenuity in extricating themselves from a difficulty which does not exist. To these persons it seems to violate some sacred canon to add a plural (or other) termination to the Latin name of a genus. *Paramecium* is correct, but I may not write *Paramecia;* instead I must struggle with such unwieldy phrases as "specimens of *Paramecium*." Or, to adopt the proposed solution of the "difficulty," I may transform the name into a "common noun" and write "paramecia."

According to S. O. Mast,[1] "a generic name is always a collective noun" and "refers to all the individuals which are similar to the type specimens of the genus." By grammatical definition, therefore, it is not a proper noun, which is the name of a single individual. But the same writer further implies that it is not a common noun, since he says he has "obviated this [the difficulty above mentioned] by using the generic name as a common noun." If a name is neither a common noun nor a proper noun, would it be improper to refer to it as an uncommon noun? C. D. Beers,[2] however, gives us the clue to this confusion when he remarks: "The following are some common animal names (hence common nouns). . . ." By "common nouns" in this discussion we are evidently to understand words in everyday use, and nothing grammatical.

The trouble is deeper than grammar—and more important. "A generic name . . . is always in the

1 SCIENCE, 96, 252, 1942.

2 SCIENCE, 96, 403, 404, 1942.

nominative case and it is always singular in number." I believe that Mast is here quoting or at least paraphrasing the rules of zoological nomenclature. The corresponding botanical code says that "Names of genera are substantives . . . in the singular number . . ." without allusion to their case. The difficulties adumbrated by the authors cited originate in a too servile adherence to these carelessly worded dicta. The botanical version has one solecism fewer than the zoological, but it is inconceivable that either represents the real thought of the framers of the codes. Obviously, the name of a genus is a nominative singular when taken by itself, or for entry in a catalogue or index; likewise the name of a family is a nominative plural. It can scarcely be the sense of any self-respecting code of nomenclature that such a name can not be treated as other names are treated when it is introduced into discourse. When a generic name is the object of a verb, it is no longer "in the nominative case"—rules or no rules.

Linnaeus wrote: "Cerealia sunt semina majora graminum . . .: *Oryza, Triticum, . . . Mays,* excepto forte solo *Lolio,* nisi arte praeparato." And again: "Semina minora *Phalaridis, Panici, Milii, . . .*" More than a hundred years later Bentham and Hooker wrote: "Genus potius *Sisyrinchio* quam *Solenomali* affine videtur." A modern writer, describing a new genus of algae, characterizes its thallus as "erectus ex fundamento radicato in cryptostomatibus *Cystoseirae* immerso." How else could you say these things? To say that a word is "always in the nominative singular" is tantamount to saying that it can not be used in a sentence except as the subject of the verb. Are we to pretend that the italicized words in these quotations are not names of genera but "common nouns"? In English we have no endings for genitives and ablatives; so we say "seeds of *Panicum*" and the like. But we do have plural forms, and we need not hesitate to use in an English sentence the plurals of Latin words, as we do those of *nucleus* and *alumnus*. *Crataegi* means members of the genus *Crataegus,* as "the Smiths" means members of the Smith family. If English had case-inflections, we should undoubtedly enjoy dative, ablative, locative and genitive Smiths, to say nothing of vocative Smiths ("O Smittee . . .").

Obviously, there is need here for clarification of the rules of nomenclature. To say that names can not be declined is not only without precedent in grammar or in science—it is without use. If our steed is to carry us surely and swiftly, it is inadvisable to hamstring him. What mirth would be provoked among the "fathers" of our science if they could see their successors laboring to render impotent the technical language which they devised!

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A NEW GENERAL TERM FOR MINERAL INDUSTRIES STUDIES

DURING the recent summer the undersigned received from Dean Edward Steidle, of The Pennsylvania State College School of Mineral Industries, a letter part of which follows:

> I am trying to find a word that will be all-embracive for earth sciences, mineral economics, mineral engineering and mineral technology, i.e. mineral service, mineral work or mineral utilization. If there is no word, I have in mind that a new word might be coined. . . .

The purpose of the present communication is to bring before earth scientists the term that the undersigned has suggested. It appears to embrace the techniques and studies involved, to be readily pronounced, to be easily recognized and understood, and to the writer, a Hellenist, to have the virtue of sound etymological formation. The new word is "geotechnology."

It is the considered opinion of the writer and of Dean Steidle that this is a new term, and we thus record it. Specific reference to contrary evidence will be greatly appreciated.

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SPECIAL CORRESPONDENCE

SUGGESTIONS FROM THE OFFICE OF SCIENTIFIC PERSONNEL OF THE NATIONAL RESEARCH COUNCIL

As soon as the Army and Navy training programs are in full operation there will be an unprecedented demand for teachers of physics and mathematics. The situation will be particularly critical in the field of physics where the teaching ranks of colleges and universities have already been seriously depleted.

It is the business of the Office of Scientific Personnel to assist in the placing of the scientific specialist where he can best serve the war effort. Because the present supply of physicists approximates zero and the supply of mathematicians is running low, perhaps this office can assist best by suggesting two sources of supply close at hand to the institutions which are so fortunate as to secure Army and Navy contracts.

The first source of supply is the near-by institutions which will not have Army or Navy training programs. Although these institutions should con-