

The known distribution of *A. ellisi* includes the Gulf of California and nearby Socorro and Clarion Islands<sup>11,12</sup>. The adults do not appear to extend to the Isthmus, but their distribution is not well known.

If the crown-of-thorns were to invade the Caribbean it would find a lush habitat to exploit in the present extensive coral biotope. A population explosion on a scale comparable with that of its Indo-Pacific relative would be disastrous.

An invasion of the Caribbean by *A. ellisi* is entirely possible should a sea-level canal be constructed without a barrier to the free distribution of marine animals. The alternative to risking invasions into either ocean by potentially dangerous foreign species is patently clear; construction of a suitable biological barrier in any new trans-isthmus canal.

Yours faithfully,

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<sup>1</sup> Rubinoff, I., *Nat. Hist.*, **74**, 69 (1965).

<sup>2</sup> Briggs, J. C., *Science*, **162**, 511 (1968).

<sup>3</sup> Briggs, J. C., *Bioscience*, **19**, 44 (1969).

<sup>4</sup> Topp, R. W., *Science*, **165**, 1324 (1969).

<sup>5</sup> Weathersbee, C., *Science News*, **94**, 578 (1968).

<sup>6</sup> Chesher, R. H., *Science*, **165**, 280 (1969).

<sup>7</sup> Barnes, J. H., *Austral. Nat. Hist.*, **15**, 256 (1966).

<sup>8</sup> Williamson, D. E., *Skin Diver*, **17** (3), 26 (1968).

<sup>9</sup> Harding, J., *Sea Frontiers*, **14**, 258 (1968).

<sup>10</sup> Ziesenhenn, F. C., *Zoologica*, **22**, 209 (1937).

<sup>11</sup> Madsen, F. J., *Vidensk. Medd. dansk naturh. Foren. Kbh.*, **117**, 179 (1955).

<sup>12</sup> Caso, M. E., *Ann. Inst. Biol. Mex.*, **32**, 313 (1962).

## Pulses, Units, Pitts and Hertz

Sir,—I refer to Stark's letter<sup>1</sup> proposing a new unit of frequency, pitta, for nerve pulses per second, which would simplify the use of neurophysiological papers and graphs. I wish to point out that the results of radioactivity measurements are likewise expressed in pulses (counts) per unit time, and that some confusion exists concerning units of frequency, because no distinction is made between periodic and aleatory phenomena.

Frequencies of periodic phenomena are expressed in Hertz units (with dimension  $s^{-1}$ ), an accepted derived unit in the International System of Units (SI). The same dimension applies to averaged frequencies of aleatory phenomena like those mentioned in the preceding paragraph; the word "averaged" is intended to imply that the duration of the measurement is appreciably larger than the statistical frequency of the aleatory phenomenon. According to the latest ICRU report on radiation quantities and units<sup>2</sup>, the unit for activity, the Curie (accepted by SI), is defined as  $3.7 \times 10^{10}$  nuclear transformations (that is disintegrations or isomeric transitions) per second. However, in accordance with the former definition of the Curie as a unit of quantity of a radioactive nuclide, the presently accepted definition of the Curie includes the words "... nuclear transformations occurring in a quantity of radioactive nuclide per second", although the italicized part is irrelevant since the dimension of the Curie unit is  $s^{-1}$ .

Until a treaty for the non-proliferation of scientific units (and journals) has been signed, I support Stark's proposal<sup>1</sup>, with the proviso that frequencies of periodic phenomena should be expressed in Hertz, results of absolute measurements of radioactivity in Curie, and averaged frequencies of aleatory phenomena (including results of relative measurements of radioactivity) in a new unit (all these three units have  $s^{-1}$  as dimension). It would have been better to have only two frequency units, one

for periodic and the other for aleatory phenomena, but this seems to be no longer possible.

Yours faithfully,

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<sup>1</sup> Stark, L., *Nature*, **225**, 394 (1970).

<sup>2</sup> *Radiation Quantities and Units*, Report No. 11 of the International Commission on Radiation Units and Measurements (Washington, DC, September 1, 1968).

## University News

**Dr Donald G. Rea**, NASA, has been appointed to the newly created post of assistant laboratory director for science at the Jet Propulsion Laboratory, **California Institute of Technology**.

**Professor C. R. O'Dell** has been reappointed chairman of the Department of Astronomy and Astrophysics and director of the Yerkes Observatory, and **Professor Eugene N. Parker** has been appointed chairman of the Department of Physics, in the **University of Chicago**.

**Dr Eli Chernin** has been appointed professor of tropical public health in the Faculty of Public Health, **Harvard University**.

**Professor Richard H. Greenwood**, University of Queensland, has been appointed to the second chair of geography, at the **University College of Swansea**.

## Appointments

**Professor J. Cruickshank**, University of Sussex, has been appointed to membership of the **University Grants Committee**, and **Professor C. E. H. Bawn**, University of Liverpool, **Professor R. C. Cross**, University of Aberdeen, and **Professor J. Diamond**, University of Manchester, have been reappointed.

**CORRIGENDUM.** At a meeting of the Parkinson's Disease Society on February 11 the impression arose that patients involved in trials of L-dopa would have to stop taking the drug when trials are completed. (*Nature*, **225**, 675; 1970.) Professor J. N. Walton, chairman of the MRC working party on L-dopa, has pointed out that this is not correct, and that patients who benefit from L-dopa have been guaranteed a continuing supply after completion of trials.

## International Meetings

April 2-3, **Creativity in Engineering**, Birmingham (C. Hearn Buck, University of Aston in Birmingham, Gosta Green, Birmingham 4).

April 7-9, **Statistical Techniques for Library and Information Work**, London (Education Officer, Aslib, 3 Belgrave Square, London SW1).

April 7-10, **Special Library and Information Work**, London (Education Officer, Aslib, 3 Belgrave Square, London SW1).

April 7-10, **Bio-Medical Engineering**, Oxford (J. D. Gasking, Department of Pharmacology, The Medical College of St Bartholomew's Hospital, Charterhouse Square, London EC1).

April 9-10, **Metabolism and Biological Functions of Polyamines**, New York (New York Academy of Sciences, 2 East 63rd Street, New York, NY 10021, USA).

April 14-16, **Handling Current Records**, London (Education Officer, Aslib, 3 Belgrave Square, London SW1).