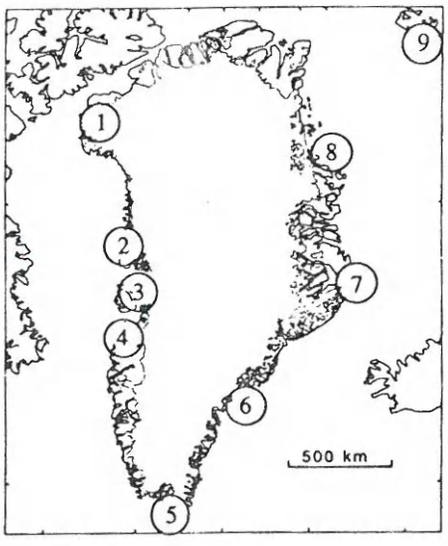
Clue to seal epizootic?

SIR—By testing for the presence of antibodies to canine distemper virus (CDV) in blood samples collected from seals in Greenland during 1984–87, we have obtained evidence for the presence of a morbillivirus related to CDV in Arctic seals before the epizootic that killed more than 17,000 seals in Northern Europe[1] in 1988 and several thousand in Lake Baikal[2,3] in 1987–88.

Of blood (and tissue) samples collected from about 1,600 Greenland seals as part of a project to measure heavy metal



Location of sampling sites.

concentrations in the Greenland marine environment, we have tested samples from ten ringed seals (*Phoca hispida*) from each of nine localities in Greenland and Svalbard (see figure) and from ten harp seals (*Pagophilus groenlandicus*) from four of these sites. Each group of ten animals comprised three yearlings, three subadults and four adults. Only four of the 90 ringed seals tested positive (two weakly positive) but there were twelve positive tests among the 40 harp seals (see table). Immunoglobulin G prepared from a whole blood sample from a harp seal by ammonium sulphate precipitation and examined for neutralizing antibodies using the Onderstepoort strain of CDV, had a neutralizing titre of 1/256, confirming[4,5] that these antibodies were induced by a morbillivirus closely related to CDV. The year of sampling does not explain the differences between the two species tested.

No. of seals with antibodies (year)		
Locality (no. on map)	Ringed seals	Harp seals
Thule (1)	2 (1985)	1 (1985)
Upernavik (2)	0 (1985)	6 (1985)
Umanak (3)	0 (1987)	4 (1985)
Kangatsiaq (4)	0 (1986)	1 (1986)
Nanortalik (5)	0 (1986)	
Angmagsalik (6)	0 (1987)	
Scoresbysund (7)*	2 (1986)	
Danmarkshavn (8)	0 (1984/86)	
Svalbard (9)	0 (1986)	

CDV-antibody detection by an indirect fluorescent antibody test with FITC-conjugated protein A.
*Weak response

We conclude that CDV or a closely related morbillivirus was present in harp seals and ringed bells before a similar virus first appeared in seals in northern Europe or Lake Baikal. It is not clear whether, and if so how, the virus spread from the Greenland seals to Europe, or what relationship, if any, there is between our observations and the outbreak of canine distemper in sledge dogs in northwest Greenland during the winter of 1987–88. It has been suggested[6] that the large-scale migration of harp seals from the Barents Sea to north Europe in 1986–87 was responsible for the spread of the viral disease, but Barents Sea harp seals have not yet been tested for the presence of CDV antibodies and this pathway could hardly explain the infection of the Lake Baikal seals.

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What's in a name?

SIR—Newman[1], in answer to Crisp and Fogg's letter[2] concerning changes in systematic names, argues that a reversion to the use of subgenera is unsatisfactory. We are in entire agreement with this view. If the evidence of taxonomists dictates the transfer of a species to another genus, or creating a new genus, so be it. "Messing up past literature" and "imposing additional burdens on the memory" are insufficient reasons to warrant an overhaul of the taxonomic system[3].

The solution is not to alter the behaviour of taxonomists but to address and find solutions to the difficulties that progress in taxonomy causes to the scientific community. A mechanism is needed to express taxonomy in a way that avoids the confusion and discontinuity in the literature which results from changes in assignment and conflicting opinions.

We suggest that when the generic assignment of a species has been changed, an interchangeable trinomial of the form genus, (=genus), species is used. For example, the barnacle species that is referred to in current literature as both *Semibalanus balanoides*[3] and *Balanus balanoides*, would be named *Semibalanus* (=*Balanus*) *balanoides* (or vice versa). The trinomial would avoid confusion in the literature, allow understandable sentimental attachment to a name, and eliminate the requirement that authors know the prior history of the name in order to trace information in the literature.

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Bird population densities

SIR—Pimm and Redfearn[1] claim to have shown that, in a sample of 100 populations of animals, there is a general tendency for the between-year variance in population density to increase as one considers longer spans of years. They reasonably conclude that most populations show long-term changes in size, in addition to fluctuations between successive years, and suggest that these patterns may be related to similar patterns in physical variables.

Unfortunately, 74 of the populations considered are of birds counted in the common bird census (CBC) of the British Trust for Ornithology, in which long-term trends may appear merely as artefacts. In the CBC, sample plots are censused annually. Because there is an annual turnover of about one plot in eight, the population is indexed by using plots counted in two successive years to give a measure of population change between those years and then stringing together successive changes to give an index of population numbers against a base year. Thus, the index in one year is correlated with that in previous years and, because the measure of population change between successive years is subject to sampling error, the population index may drift away from the base value even if the population numbers themselves do not change.

The likely magnitude of this random drift has been considered previously. Although it is probably less in the CBC than in some similar censuses[2–4], it can give