levels that have been reported have never, to the best of our knowledge, been so high as to warrant alarm in terms such as “catastrophe” and “lethal levels.” Nevertheless, the public must be protected against unusual prolonged periods of air stagnation and against local pockets of high concentrations of carbon monoxide that might occur during such periods in areas of traffic congestion.

The estimated 50-percent reduction of carbon monoxide emissions that will be brought about by compliance with the 1968 federal requirements should bring the prevailing atmosphere in New York City well below the New York State standard as new cars replace the older cars now on the streets. In extremely congested areas, somewhat higher levels may persist and public officials must evaluate what hazards, if any, may be associated with them so that appropriate control measures can be taken.

In summary, the trend of carbon monoxide concentrations in the prevailing atmosphere, and even in local congested areas, in large cities like New York is expected to be definitely downward despite any reasonable projected increase in national car population.

J. M. Campbell
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References
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   tute at the University of Wisconsin, Madison,
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Cold North Winds

I hope the Eskimologists don’t elaborate too many animated hypotheses of Eskimo social, intellectual, and esthetic beliefs on the basis of the mask purporting to be “half man, half animal” (Science, cover right, 29 Dec.). The mask shows a classic Bell’s palsy (facial nerve paralysis) on the right, with full voluntary contraction of the facial muscles achieved on the left. Old wives

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RANGE OF APPLICATION

<table>
<thead>
<tr>
<th>Solvent</th>
<th>Approx. solvent regain ml solvent/g dry gel</th>
<th>Approx. bed volume ml/g dry gel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimethylformamide</td>
<td>2.2</td>
<td>4</td>
</tr>
<tr>
<td>Water</td>
<td>2.1</td>
<td>4</td>
</tr>
<tr>
<td>Methanol</td>
<td>1.8</td>
<td>3.5-4.0</td>
</tr>
<tr>
<td>Ethanol</td>
<td>1.6</td>
<td>3.0-3.5</td>
</tr>
<tr>
<td>Chloroform</td>
<td>1.8</td>
<td>3.0-3.5</td>
</tr>
<tr>
<td>n-Butanol</td>
<td>1.8</td>
<td>3.0-3.5</td>
</tr>
<tr>
<td>Diisobutylate</td>
<td>1.4</td>
<td>2.5-3.0</td>
</tr>
<tr>
<td>Tetrahydrofuran</td>
<td>1.4</td>
<td>2.5-3.0</td>
</tr>
<tr>
<td>Acetone</td>
<td>0.8</td>
<td>1.5</td>
</tr>
</tbody>
</table>

*Containing 1% ethanol. Particle size: 75-100 µm.

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The Naïveté of Science

In “Environmental pollution: Scientists go to court” (22 Dec., p. 1552), Carter cites the enthusiasm of Yannacone for the testimony given by scientists: “Those guys are virgin witnesses” he says.” Carter then summarizes testimony given by Wurster, including the statement: “In New Hanover [presumably he means Hanover] 70 percent or more of the robins died, whereas in Norwich the population of robins actually increased, Wurster said.”

The detailed report by Wurster et al. [Ecology 46, 488 (1965)] states:

Since the study areas represent 2½% of the sprayed part of town, and the May 1 resident population on these areas averaged 12 robins, the total Hanover Robin population was approximately 500 to 550. Based on a 70% decline in the study areas by June 1, total Robin mortality in Hanover was about 350 to 400 birds.

The virginity extolled by Yannacone as an attribute of scientists would be helpful to those who wish to accept the extrapolation, made by Wurster, based on a sample of 12 robins. Worldly readers, however, might wonder if some of the Hanover robins had flown across the Connecticut River to Norwich, 2 miles away.

Robins fortunately are well equipped to fight off the extinction that has been metered out to them by the pens of conservationists. Roger Tory Peterson [The Birds (Time Inc., New York, 1963), p. 85] states:

What is North America’s number one bird? Is it the house sparrow, introduced from England? Almost certainly not; the starling, less restricted to cities and farms, now outnumbers it. The American robin, however, is a more likely candidate than either. Found from coast to coast, it inhabits cities and forests alike and is one of the most abundant birds in the vast, 3,000-mile belt of conifers stretching across Canada to Alaska.

THOMAS H. JUKES
Space Sciences Laboratory,
University of California, Berkeley

tell that the à frigore variety of Bell’s palsy results from cold wind blowing on the cheek, sitting at an open window, and the like. Perhaps the Eskimologists will, with further study, be able to tell us if the subject for this mask lived in a drafty igloo.

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APPOINTMENTS

W. Franklin Blair, professor of zoology, University of Texas, to chairman of the U.S. National Committee for the International Biological Program. He succeeds Roger Revelle, director of the Center for Population Studies, Harvard University. . . . Nils Y. Wessell, president of the Institute for Educational Development, and former president of Tufts University, to president of the Alfred P. Sloan Foundation. He succeeds Everett Case, who will retire. . . . Victor G. Rosenblum, professor of political science and law, Northwestern University, to president, Reed College. . . . Robert S. Hansen, chairman of the department of chemistry, Iowa State University, to director of the university's Institute for Atomic Research and AEC's Ames Laboratory. He succeeds Frank H. Spedding, who will become distinguished professor of science and humanities at the university, and principal scientist at the laboratory. . . . John D. Williams, chancellor of the University of Mississippi has retired. He is succeeded by Porter L. Fortune, executive secretary of the National Exchange Clubs, Toledo, Ohio. . . . Solis Horwitz, assistant secretary of defense for administration, DOD, to university professor, University of Pittsburgh. . . . Thomas H. Morrin, vice president for engineering sciences, Stanford Research Institute, to president of University City Science Institute, Philadelphia. . . . Thomas D. Nicholson, chairman of the American Museum–Hayden Planetarium, to assistant director of the museum. He succeeds Joseph M. Chamberlain, who is now director of the Adler Planetarium, Chicago. Nicholson's position as chairman will be taken by Franklyn M. Branley, who is now astronomer and assistant chairman at the planetarium. . . . Robert E. Marshak, distinguished university professor of physics, University of Rochester, to the American member of the eight-man Scientific Council of the International Centre for Theoretical Physics, Trieste, Italy. He succeeds the late Robert Oppenheimer. . . . Vincent E. Price, associate chief for scientific programs of the Research Training Grants Branch, National Institute of General Medical Sciences, to special assistant to the director for special programs, NIGMS. . . . Feodor Lynen, director of the Max-Planck Institute for Cell Chemistry, Munich, Germany, to visiting professor, department of biochemistry, University of Miami. . . . Herbert E. Christensen, executive officer of the Third Army Medical Laboratory and chief of the chemistry division, Fort McPherson, Georgia, to assistant director for research administration, Center for Research in Pharmacology and Toxicology, University of North Carolina Medical School, and industrial toxicologist, department of environmental sciences and engineering, School of Public Health at the university. . . . Joseph F. Foster, interim head of the department of chemistry, Purdue, to head of the department at the university. . . . James D. Lawrence, financial management officer, Division of Regional Medical Programs, NIMH, to chief of the financial management branch, NIMH. . . . Harry Kessler, director of the spinal cord injury medical program, Veterans Administration, will retire after 33 years of service. . . . John P. Schafer, associate professor of chemistry, University of Arizona, to head of the department of chemistry at the university. He succeeds Henry Freiser, who will devote more time to research. . . . J. E. Slater, program officer, Office of International Relations, Ford Foundation, to president of the Salk Institute. . . . Raymond A. Jensen, scientific and technical communications officer, Federal Water Pollution Control Administration, to manager, Water Resources Scientific Information Center, Department of the Interior; and Logan O. Cowgill, chief, scientific and technical information division, Office of the Chief of Engineers, U.S. Army, to assistant manager, Water Resources Scientific Information Center. . . . Andor Szentvanyi, associate professor of microbiology and pharmacology, University of Colorado Medical School, to chairman of the department of microbiology, The Creighton University School of Medicine, Omaha, Nebraska. . . . James F. Hammarsten, vice chairman of the department of medicine, University of Oklahoma Medical Center, to chairman of the department. He succeeds Stewart Wolf, who will devote more time to research and teaching.

RECENT DEATHS

Alekandr Y. Arbuzov, 90; former head of the department of organic chemistry, Kazan University, U.S.S.R.; 22 January.

William E. Bennett, 61; professor of physics, State University of New York at Buffalo; 12 January.

Leland W. Crafts, 75; former chairman of the department of psychology, New York University; 23 January.

Alta R. Gault, 61; assistant professor of pharmacology, University of Mississippi School of Pharmacy; 1 January.

Leopold Infeld, 69; director of the Theoretical Physics Institute, Warsaw University; 16 January.

Alexander T. Martin, 81; former head of the pediatrics department, Roosevelt Hospital, New York, and former president of the New York Academy of Medicine; 15 January.

Albert A. Plentl, 54; associate professor of obstetrics and gynecology, Columbia University College of Physicians and Surgeons; 11 January.

John S. Peck, 74; former professor of civil engineering, City University of New York; 20 January.


Carlos I. Reed, 80; professor emeritus of physiology, University of Illinois College of Medicine; 6 December.

Arnold M. Rose, 49; professor of sociology, University of Minnesota; 2 January.

Karl H. Sterner, 41; former senior research chemist, American Potash and Chemical Corporation; 5 January.

Raymond C. Strassburger, 58; chairman of the department of psychology, St. Joseph's College for Women, Brooklyn; 23 January.

Richard H. Walters, 50; former chairman of the department of psychology, University of Waterloo, Canada; 27 December.

G. B. Wilson, 54; professor of botany and plant pathology, Michigan State University; 18 January.

Erratum: In "Isolation of $N,N$-diethyl-m-toluanide (Deet) from female pink bollworm moths" by William A. Jones and M. Jacobson (5 Jan., p. 99), there was an error in Insert II. The second m/e 91 structure should have been tropylion cation and not the six-membered ring shown in the report. The corrected figure is shown below:

![Corrected diagram](image-url)
mentalism. In all his discussion of the wide variety of investigations he has taken care to emphasize the contribution to the research of advances in experimental technique. On almost every page there is a diagram of apparatus or data. These diagrams are clearly labeled and carefully discussed. A chronicle of the progress that has been made in the study of quantum liquids and solids would read like a history of cryogenic technology. The flavor of such a chronicle is found in this book.

The emphasis is always on the physics of the properties of liquid and solid helium, however. In the early chapters those aspects of the theory which led to a useful intuition about the behavior of the “excitations” in quantum liquids are well handled. The text is extensively referenced, showing the author's great and critical awareness of the vast literature in this research area.

Wilks's book supersedes all previous books on liquid or solid helium. It would be an excellent text for a low-temperature physics course (lasting three or four semesters); it should certainly be on the bookshelf of every serious low-temperature physicist.

ROBERT A. GUYER
Department of Physics, Duke University, Durham, North Carolina

Biotoxicology


Participants will remember this meeting with pleasure as one that was well organized. Fewer than 100 people attended. The talks, almost all of which are presented in the volume under review, were given and attended by immunologists, chemists, taxonomists, physicians, anatomists, and physiologists. Almost half the participants came from foreign countries, their visits made possible by federal grants. Animal Toxins reflects the happy mixture of these different fields of endeavor. About 160 pages are devoted to invertebrate and about 230 to vertebrate toxins. Each paper is well edited and has a summary. The discussion and questions are not reproduced. The individual presentations vary in quality, but the overall standard is high. Included in the volume are the microphotographs of black-widow venom glands, by David S. Smith, showing that the secretion of the glandular epithelium leads to the disintegration of the cells, a finding that indicates a source of complexity of the venom. Unfortunately the publisher has placed legends and explanations of abbreviations in the plates several pages away from them. Of particular interest is the presentation by J. H. Barnes on Australian cubomedusae. The sting of Chironex fleckeri, only 18 by 18 by 24 centimeters, with 13 to 15 tentacles 1 meter long when partially contracted, can cause the death of a healthy adult in less than 3 minutes. Venom research on this difficult group of jellyfish has been made possible by new extraction methods. Washed human amnion salvaged from local hospitals are used because the nematocysts do not discharge on artificial membranes. R. En- dean, with other Australian researchers, reported that only piscivorous conid snails cause serious injury to humans, directly paralyzing skeletal muscle; those conids that feed on mollusks and worms are not dangerous. The anatomy of Echinohthrix sea urchin spines and their biologically active substance, probably noradrenaline, is described. There is a paper on the feared South American freshwater rays by M. N. Castex. H. Michl and collaborators, from Austria, describe the toxin of skin secretions of the European newts (Triturus) and unks (Bombina), which not only provide protection against predators but also keep the animal's skin moist and contain an antibiotic that prevents the growth of mold and microorganisms on its surface. There are, as befits any volume on toxins, numerous pages on snakes, again by specialists from various fields. The neurotoxic fractions of a number of venoms studied, including those of black widows and Centruroides scorpions, were found to be proteins of low molecular weight. An unfortunate omission from the subjects discussed is the biological implications of the evolution of venoms in various animals. What are the selective factors responsible? Of what importance are the poisons to the animals? Despite this shortcoming, the general biologist will find valuable information in this book; it will be essential to those working with venoms.

HERBERT W. LEVI
Museum of Comparative Zoology, Harvard University, Cambridge, Massachusetts

Books Received


(Continued on page 767)
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