versity are: Professor Nevin M. Fenneman, of the University of Cincinnati, "Desert Forms and Desert Processes"; Dr. Harrison Schmitt, consulting geologist, "The Training of the Mining Geologist"; Professor H. E. McKinstry, of the University of Wisconsin, "Structural Control in Certain Australian Gold Districts"; Professor E. S. Bastin, of the University of Chicago, "Silver Ores as Illustrations of Problems of the Mining Geologist"; Theron Wasson, chief geologist, Pure Oil Company, "Petroleum Prospecting Methods in Latin America"; Dr. Sherwin F. Kelly, consulting geophysicist, "Magnetic and Electrical Technique in the Mining and Petroleum Fields"; and Dr. H. K. Gloyd, director of the Chicago Academy of Science, "Desert Ecology."

Nature states that in a written reply to a Parliamentary question on April 29, Mr. Butler, Under-Secretary for Foreign Affairs, said: "After consultation with the appropriate authorities in the United States, His Majesty's Government have drawn up a comprehensive scheme, which has already been put into operation, for cooperation in scientific matters with the United States of America. His Majesty's Government have selected and sent Dr. Darwin, the director of the National Physical Laboratory, as director of a Central Scientific Office, working under the direction of the British Supply Council in North America. Dr. Darwin's duty will be to collaborate with United States research bodies, to act as a channel for the exchange with the appropriate United States authorities of technical and scientific information, and generally to coordinate scientific and technical inquiries to and from the United States authorities, except in those matters which are already dealt with through the Service attachés. In addition, Dr. Conant, the president of Harvard University, recently visited England as President Roosevelt's representative in order to establish a corresponding mission in this country."

DR. C. A. WEATHERBY writes to the *American Fern Journal* calling attention to the publication of a new periodical entitled *Natura* published in Japanese and Portuguese by the Kanihara Institute of Natural Science of Brazil at São Paulo. The first installment of a "Flora Nippo-Brasiliensis" appears in this issue.

DISCUSSION

ORIENTAL RAT FLEA ESTABLISHED IN KANSAS

THE occurrence of the oriental rat flea, *Xenopsylla cheopis* (Roth.),[1] in Kansas was reported at the 1941 meeting of the Kansas Academy of Science.[2] This report was based upon 20 fleas from eight rats, *Rattus n. norvegicus* (Erxleben), taken in September, 1940, at the Manhattan city dumping ground. Whether or not fleas of this species could overwinter at Manhattan was problematical, as there have been but few instances in which these fleas have been reported in both the fall and the spring from the same location in the interior of the United States. To test the ability of *X. cheopis* to overwinter at Manhattan, Kansas, another group of adult rats was taken on April 24, 1941, at the city dumping ground. Each of the four rats obtained was infested with from two to eight fleas. On examination, all the fleas were found to be *Xenopsylla cheopis* (Roth.), thus indicating that the oriental rat flea can overwinter at Manhattan, Kansas, and that it is established here.

While *Xenopsylla cheopis* figured in the losses of millions of human lives from bubonic and other types of plague during the period from the sixth to the nineteenth centuries, its greatest importance in the interior of the United States is probably in connection with sylvatic plague, a type that occurs mostly in wild rodents. In recent years, several fatal human cases have been reported. According to Eskey and Haas,[3] sylvatic plague is spreading eastward from western United States. Since 1900, when it was first discovered in the United States at the port of San Francisco, sylvatic plague has been reported from the following interior states: Arizona, Idaho, Montana, New Mexico, Nevada, Utah and Wyoming. These reports include territory east of the Great Divide in New Mexico and Wyoming. That the oriental rat flea, which has been present in coastal cities since 1900, is spreading into the interior has been shown by a number of reports. Trembley and Bishopp[4] listed the following interior states from which *Xenopsyllus cheopis* has been reported: Indiana, Iowa, Minnesota, Illinois, Ohio and Tennessee. The presence of the oriental rat flea in these states and in Kansas, as here reported, and the eastward movement of sylvatic plague, a fatal human disease, make it evident that steps should be taken to control this important pest. While ground squirrels, mice and cottontail rabbits may harbor *Xenopsyllus cheopis*, the principal hosts of this flea are species of rats of which the common gray rat, *Rattus n. norvegicus* (Erxleben), is the most important.[5] These animals are also susceptible to the plague organism,

[1] Identification confirmed by Dr. H. E. Ewing, Bureau of Entomology and Plant Quarantine, Washington, D. C.

[2] A. W. Grundmann, H. P. Boles and J. E. Ackert, *Trans. Kans. Acad. Sci.*, Vol. 44 (in press).

[3] C. R. Eskey and V. H. Haas, *Public Health Rpt.* 54: 1467–1481, 1937.

[4] Helen Louise Trembley and F. C. Bishopp, *Jour. Econ. Ent.*, 33(4): 701–703, August, 1940.

[5] W. B. Herms, "Medical Entomology," 3rd ed., New York: Macmillan, 1939.

Pasteurella pestis (Leh. and Neu.), and could therefore act as a potential menace for the spread of the disease to the common rat. Campaigns against rats in Kansas and other states in which *X. cheopis* is known to occur would thus serve interests of public health as well as economy.

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JOURNALS FOR LATIN AMERICAN COUNTRIES: A CHALLENGE TO SCIENTIFIC SOCIETIES[1]

THE suggestion is frequently made that we in the United States might help in building hemisphere solidarity through the international language of science, and a good suggestion it is. Our scientific societies publish hundreds of journals, and why shouldn't they help in one way or another to further our widely proclaimed policy of being the "good neighbor"?

The *"Handbook of Scientific and Technical Societies and Institutions of the United States and Canada"*[2] lists over 900 such groups for the United States and its dependencies, and nearly 150 for Canada. Of this number well over 100 are sufficiently national in scope to "go Pan American" quite readily. In the latter group there are approximately 60 societies in the field of medicine, 40 in animal and plant science, and smaller numbers (groups with large memberships, publishing splendid journals) in chemistry, physics, geography, geology, etc. So, here we are with at least 100 to 150 scientific organizations potentially ready to send their journals and their scientific good-will to Latin American countries.

The result of a survey of the present circulation of 21 of our biological and chemical journals (late 1940) appears in the accompanying table. It will be seen that the chemical journals go south in larger numbers than the others. In general, the countries not mentioned are receiving about as many journals as the countries listed. Biological societies publishing the journals indicated have memberships of about 500 to 1,500, and the American Chemical Society approximately 25,000: thus, as far as scientific societies are concerned, the present circulation of their journals is not greatly different for the different groups, on a per member basis. The surprising thing is the small number of journals going to the 16 countries indicated. Even *Biological Abstracts,* the only comprehensive biological abstracting journal of its kind, has but 34 subscriptions going to the countries mentioned. It is

JOURNAL		Argentina	Bolivia	Brazil	Chile	Colombia	Costa Rica	Ecuador	Guatemala	Honduras	Mexico	Panama	Paraguay	Peru	Surinam	Uruguay	Venezuela
American Journal of Botany	P	2		1							1	1		1			
	I	4		7													
Botanical Gazette	P			1													1
	I			7													
Bulletin of the Torrey Botanical Club	P	4		1	1	1										1	2
	I	3		1													
Journal of Bacteriology	P	3		2		3					3	2					2
	I	3		8	3	3	1		1		3			2			
Phytopathology	P	12		9		1		1							1		1
	I	16		8	1	2				1				1	1	2	2
Plant Physiology	P			1							1						
	I	3		5													2
Ecology	P	4		2													
	I	3		9							1			1			
Endocrinology	P	22		11	5	7			1		2						2
	I	7		11	6		1				5			1			
Genetics	P	4		2										1		1	
	I	1		10										1			1
American Journal of Anatomy	P															1	
	I	1		3	2	1											
American Journal of Physiology	P	4		0	3			1								1	
	I	2		4	3	1								1			
American Journal Physical Anthropology	P	2		2										2			
	I	1		2	1						2			1			
Anatomical Record	P	1		1	2											1	
	I	1		2	2												
Journal of Comparative Neurology	P	2		2				1									
	I	2		2													
Journal of Nutrition	P	5		2	1									1			
	I	5		4	3		1				1	1					2
Physiological Reviews	P	8		2	4									1		3	2
	I	3		3	2	1											1
Chemical Abstracts	P	38		17	6	4	2	1	2		31		1	6		1	6
	I	40		29	2	2					11			3		5	4
Ind. & Eng. Chemistry (Science Edition)	P	60	2	37	15	6	2	2	4	1	55		1	13	1	3	15
	I	51		32	14	5		1		1	23			5	1	8	8
Ind. & Eng. Chemistry (News Edition)	P	49	1	28	15	9	2	2	4	1	49		1	10		2	15
	I	45		20	10	4		1		1	18			3		6	8
Journal of the American Chemical Society	P	20	1	16	8	2	2	1	1	1	27			7		1	7
	I	17		11	4	1				1	11			2		3	5
Proceedings of the National Academy of Science	P																
	I	3		3		1											

P = PERSONAL SUBSCRIPTIONS
I = INSTITUTIONAL SUBSCRIPTIONS

FIG. 1

reasonable to assume that there are either relatively few workers in the biological field in Latin America, or that they are not sufficiently well acquainted with our societies or journals to find them useful. A further possibility is that many of those who might be interested, can not afford to take our journals because of the relatively high subscription rates (exchange).

Here are a few suggestions, some of which might

[1] The data on journal circulation are presented with the permission of those concerned; their cooperation is gratefully acknowledged.

[2] Bulletin No. 101, National Research Council, Washington, D. C. 283p. 1937.