something to give to the East. Fathers Gerbillon and Pereyra brought two pounds of cinchona bark from South America and in 1692 cured the Chinese emperor of malarial fever. From that time on the Chinese were desirous of obtaining western physicians. Quinine and smallpox-vaccine were imported. English and Russian physicians arrived and finally Americans. In 1834 Peter Parker "opened the doors" of China by the introduction of medical service. In 1854 Dr. Hobson successfully employed chaulmoogra oil in leprosy. In 1898 Dr. Kerr gave western medical service to the first patient in an insane asylum in China. In 1904 the University of Pennsylvania established a medical department in Canton Christian College. In 1906 the Peking Union Medical College opened. In 1908 the Yale Mission hospital at Changsha was opened. In 1912 the Harvard Medical School at Shanghai was amalgamated with St. John's. In 1915 the China Medical Board assumed support of Peking Union Medical College.

The "History of Chinese Medicine" is written by Wong and Wu in a classical manner. The Chinese ideograms are reproduced in clear type and the book is indispensable to the student of the history of medicine. One is impressed with the principle, which is as true to-day as it was in the past centuries, that too prolonged adherence to an idea is not very fruitful and that Chinese medicine was greatly retarded by adherence to alchemy.

A list of 26 Chinese medical and pharmaceutical journals is given. No reference to Ma Huang or ephedrine was found.

J. F. McCLENDON

ECOLOGY OF THE PRAIRIE

MESSRS. J. E. WEAVER and T. J. Fitzpatrick, of the University of Nebraska, in their recently published study, "The Prairie"[1] supply a most valuable account of this plant community in the United States. Professor Weaver, with the help of his advanced students, has for many years been making studies of grasslands, his work on root systems especially attracting the interest of plant ecologists. In previous papers the climatic and edaphic conditions of the prairie region were described, and the autecology of dominant grasses was fully considered, hence the present monograph, omitting these topics, can and does give in 185 pages a systematic survey of the vegetation itself, its "types," minor communities, the components other than grasses, seasonal aspects, physiological activity, invasion and succession. In all, 135 representative areas of prairie were examined; these are scattered from South Dakota and Minnesota through Nebraska, Iowa and Missouri into Kansas.

The authors conclude that climax prairie is a closed community. There being no open ground for establishment of seedlings, the reproduction is largely vegetative; all the dominant and nearly all the subdominant species are perennials; root systems of different species extend to various depths in the soil, so that the soil water is fully used; layering of subaerial parts secures utilization of available light; rapidity of growth and early maturity characterize the vegetation as a whole, evidently associated with the abundant sunshine throughout the growing season, together with sufficient moisture and high temperatures in June and July.

Two consociations are especially important and wide-spread, dominated respectively by the bluestem grasses, *Andropogon scoparius* of upland areas and *Andropogon furcatus* in moister lowlands. Other grass communities are characteristic of certain edaphic situations: *Spartina michauxiana* Conscoies in poorly drained soils; *Panicum virgatum-Elymus canadensis* Associes in soils somewhat less soggy; *Stipa spartea* Consociation, a bunch-grass community chiefly of the northern and western prairie districts; *Sporobolus heterolepis* Consociation, locally developed on drier hilltops. Typical quadrats show that about 96 per cent. of ground cover is made of grasses and usually less than 4 per cent. is composed of "forbs," *i.e.*, non-grasses. Of the latter the following genera are of most consequence: Achillea, Amorpha, Antennaria, Artemisia, Astragalus, Aster, Erigeron, Helianthus, Petalostemon, and Solidago. Excellent half-tone illustrations are given of these and others.

The authors are to be congratulated upon producing a readable as well as authentic account of one of the great vegetation areas of the world, one which in a few years will no longer be available for study because of man's invasion. Perhaps Messrs. Weaver and Fitzpatrick have not said the last word about the prairie, but they have described it with fullness and accuracy.

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[1] *Ecological Monographs*, 4: 109–295, 1934.

THE AUTOMOBILE AS A DESTROYER OF WILD LIFE

THE toll of wild life taken by the automobile on our public highways is far greater than one would naturally estimate. Last summer, while returning to Massachusetts from a motor trip to Iowa, records were made of the wild life lying dead in the highway.

The summer was exceptionally humid, and many animals, more especially turtles, were searching for water. More dead animals were observed in the highway on the trip out than on the return, since rain had fallen in the interim. On a highway extending 100 miles in Ohio, there was an average of one dead rabbit recorded for every mile traveled by auto.

Near one river, I counted 18 dead turtles on 60 running feet of paved automobile road.

A list of animals seen by the driver and listed by an occupant of an automobile which traveled about 500 miles in two days follows:

Bats	3	Rats	2
Birds (unidentified)	34	Skunks	18
Cats	2	Snakes	4
Chipmunks	1	Sparrows	11
Dogs	2	Squirrels (fox)	5
Foxes (red)	1	Squirrels (gray)	1
Mice	2	Toads	13
Moles	4	Turkeys	1
Muskrats	10	Turtles	8
Pheasants	2	Woodchucks	2
Rabbits	11	Woodpeckers	12
		Unidentified animals	30

Considering the vast mileage of highways throughout each state and the number of states, the total animal destruction of wild life on our automobile highways must be gigantic. One sometimes wonders if a good portion of these colossal tragedies could not be prevented by modern, scientific means if the effort were put forth. However, as far as the writer knows, little effort is being put forth to prevent automobiles from destroying countless numbers of our wild life when crossing the highways. Yet, before any effort is put into practise, research must discover a method. Perhaps culverts between swamps, rivers, lakes and brooks where many of the wild aquatics and semi-aquatics migrate might lessen this toll considerably. Through these culverts turtles, muskrats and other aquatics might find a safe means of migration. Furthermore, some of the predators feed on animals which in turn are searching for their food on the highways. The toad loves to hop over the pavement and under bright lights, in the early evening, obtain as his pabulum tiny morsels of insect life. Perhaps the removal of bright lights to margins of the highway through cities and towns would prevent this slaughter.

Paved roads bordered by forests, planted fields and natural waterways seem to take the greatest toll of our wild life. In one stretch of wooded road extending two miles, 200 dead animals were counted. Further data will bring to light the practicability of "animal crossroads" over automobile highways.

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TERMINOLOGY OF ISOTOPES

THE great interest in heavy hydrogen has brought many and sundry suggestions regarding the nomenclature of hydrogen isotopes. It is not the writer's intention to discuss these, sometimes very fanciful, proposals but merely to point to a safe, sane and simple method of naming *all* isotopes. The published lists of isotopes can readily be amended by giving to each isotopic weight an alphabetic letter in the order of the abundance of the isotope, so that *a* always signifies the most abundant, *b* the next abundant isotope.

Tin is very rich in isotopes, and these would be listed as Sn a120, b118, c116, d124, e119, f117, g122, h121, i112, j114, k115; and should occasion arise to differentiate these isotopes in a compound, the terms *i-stannic-a-chloride* or *g-stannous-b-chloride* are sufficiently precise, as well as *i-stannic-aaab-chloride* for mixed isotopes. The various possible forms of ammonia become thus: *aaa-, aab-, abb-, bbb-hydrogen-nitride*, or for short: *mono-b-, di-b-,* or *tri-b-hydrogen nitride.* This terminology will fit well into the accepted usage and even high-school students may understand the following series of compounds:

potassium chloride,	KCl =	74.463
a-potassium-a-chloride,	$K^{39}Cl^{35}$	74.0
b-potassium-a-chloride,	$K^{41}Cl^{35}$	76.0
a-potassium-b-chloride,	$K^{39}Cl^{37}$	76.0
b-potassium-b-chloride,	$K^{41}Cl^{37}$	78.8

as belonging all to the type of "chlorides of potassium." The only exception to this rule might be made in the case of b-hydrogen (deuterium, diplogen) which shows the greatest physical difference for an isotope and may thus be entitled to a distinct name.

TERMINOLOGIST

IT HAPPENED IN ARGENTINA

IN reply to the inquiry, "Where did this really happen?" made by Edward R. Warren and published in SCIENCE, No. 2039, I am glad to be able to communicate that such an event undoubtedly occurred in Argentina. I recently visited the Church of San Francisco, in Santa Fé, Argentina, as one of a numerous group, and the event in question was mentioned by a resident of Santa Fé, who accompanied us, as one of the items of interest about the church, which was built in 1680. Requesting exact information, I received a few days later a note from one of the Franciscan brothers, giving the date as the 18th of April, 1825. At that time the Paraná River was in flood and the "tigre" entered the convent from a floating island of water hyacinths. One of the Franciscans was killed outright, the other was mortally wounded and died a week later.

While the event as recorded by Darwin is thus fully substantiated, this does not exclude the possibility of a similar occurrence on the Rio Grande.

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LA PLATA, ARGENTINA