whereas Kansas and Nebraska paleontologists agree that the Broadwater and Rexroad faunas are equivalent in age and that both faunas correlate with that of the Blanco locality. These beds (Rexroad and Broadwater) occur stratigraphically above the horizon of the "algal limestone" and below the horizon of beds of undoubted Pleistocene age (Meade formation in southwestern Kansas, Grand Island and Upland formations in western Nebraska).

It is here proposed that the placement of the Blancan in either the late Pliocene or in the early Pleistocene of the standard time scale be held in abeyance until there is more general agreement among paleontologists as to its age; and that Blancan be used to serve as a provincial time zone for beds and faunas in the Great Plains region younger than the "algal limestone" and older than beds of undoubted Pleistocene age. The use of Blancan in this sense will serve to clarify current concepts with reference to these beds, will afford a uniform regional classification usable by workers in different states, and will avoid exhaustive controversy about a point of correlation that is not yet subject to conclusive proof. Of course, it is to be hoped that continued study of these beds and faunas will eventually lead to general agreement on correlation with the glacial sections of the Upper Mississippi valley and other parts of the world, and with marine beds, and thus effect a placement of Blancan time within the standard time classification.

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SPINACH AND BONE FORMATION

IN some experiments designed to test the availability of iodine as contained in certain vegetables, we have had occasion to feed a commercially prepared powdered spinach (Spintrate) to rats as an addition to a diet that had been successfully used by us as a breeding ration over several years (Purina Dog Chow). Since it has been reported that there is some substance, presumably oxalic acid, present in spinach which interferes with the utilization of calcium for bone formation,[1] it seemed of interest to keep records (Table 1) of food consumption and gain in weight of the different groups during the experimental period, and also to determine the ash content of the dried, fat-free leg bones of the animals at termination. Each group consisted of 10 young rats, equally divided as to sex. The experimental period was 35 days.

On the assumption that fresh spinach contains 90 per cent. of water, the rats which received 20 per cent. of dried spinach consumed an equivalent of 25 grams of fresh spinach per day, roughly proportional to 2¾ pounds in a human dietary of 2,500 calories. Calcium deficiency manifests itself by either decreased bone-ash or stunting of growth or both. Such effects are absent in the experiment reported, neither is there any decline in appetite or efficiency of food utilization.

TABLE 1

Diet	Gain in weight	Daily food intake (Ave.)	Bone ash
Basal	149 grams	12.3 grams	68.3 per cent.
5 per cent. spinach .	139	12.0	69.1
10 per cent. " .	148	12.2	67.4
20 per cent. " .	141	12.3	67.9

Since the basal diet here used is considered to have supplied an adequate amount of calcium for growth, it would seem that spinach, even in such relatively enormous amounts as would never be taken by human beings, would not exert a deleterious effect on growth or on bone formation unless the customary diet of the individual were lacking in calcium.

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PHOSPHORESCENT TEXAS EARTHWORMS

WHEN going down damp woods earth paths at night the writer occasionally has noticed that bright spots of phosphorescence lighted up in the disturbed soil surface after he passed, glowed for a while and then ceased. He also noticed that by scraping a foot over the area the phosphorescent effect could be repeated an indefinite number of times.

On examination of the path with a flashlight nothing was visible which could have caused the illumination. The tentative conclusion then was that the illumination came from soil bacteria or some other form of invisible microorganism which thus reacted to disturbance. However, the phosphorescence glowed in pea-sized balls, which when raked about remained as units in new positions and glowed brightly. While these balls of light sometimes were thickly placed there was no uniform distribution through the soil such as one might expect if bacteria were the cause. This phosphorescent effect usually had only been noticed during the cool weather of fall or early winter. On the night of December 6, 1944, the closing of the writer's garage door activated some of this phosphorescence when the door scraped the soil surface. The idea then occurred to remove the spots of light and examine them under bright indoor electric lights to see if the cause could be located. The area of phosphorescence was on the edge of a gravel driveway which was covered with a thin film of leaf mold composed of the small leaves of the mesquite tree.

[1] M. L. Fincke and H. C. Sherman, *Jour. Biol. Chem.*, 110: 421–428, 1935.