

*The Research Committee on Biology and Medicine of the International Association of Gerontology.* The Committee was established by the Association in 1951, during the 2nd International Gerontological Congress in St. Louis. A little later the whole Research Committee was organized, with subcommittees on Cellular Biology, Endocrinology, Pathology, Nutrition and Metabolism, and Clinical Pathologic Physiology. Since it appears to be the first of its kind in the activity of the medical and scientific associations, it can be considered as an experiment. When put into wider practice, the committee might introduce some improvements into its organization. The participants of the committee already consider it to be a definite success.

All the details of the establishment and activities of the committee are given in the report on the subject to the 2nd International Gerontological Congress (1), the Proceedings of the Endocrinological Session of the Congress (2), and the Proceedings of the Conference of the European Division of the Committee (3-5).

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### *Lepidurus kirkii*

LINDER (1) refers to a view that there is a biological difference between the branchiopods, *Apus* and *Lepidurus*; the former occur in pools that dry up, the latter are found in permanent water. He writes of having seen *L. apus* in ponds in Sweden which dry up every year, and he refers to reports by others about both genera.

It is evident that relevant data on *Lepidurus* are rather scanty and the following may be placed on record: On Marley's Hill, near Christchurch, New Zealand, are three ponds nearly equidistant and roughly in line north to south. The southernmost pond dries up annually, the other two have not been known to dry up in the past twenty years. *L. kirkii* appears regularly, annually, in the temporary pond.

In the permanent ponds, rare occurrences of two or three, or some greater small number of *L. kirkii* have been noted sometimes at intervals of several years, and are quite clearly accidental. These latter mature specimens grow to an enormous size, three times that of those in the temporary pond. They probably live a long time. There is no evidence that they have any progeny. Their presence may be caused by the carriage by the wind of occasional eggs from the dry site to the south, or from some other site.

The conclusion is that the eggs of *L. kirkii* must be dried before they will hatch.

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### Food Prices in Palo Alto

IN 1944 and 1948 reports on food prices in Palo Alto, California, were published in *SCIENCE*, **101**, 124 (1944); **108**, 425 (1948). The surveys, upon which these reports are based, were initiated in 1939 and have been made annually in the 3rd week of May. Since it has been observed that these surveys are of more than local interest, the later data are now presented for publication.

Greater Palo Alto (inclusive of Stanford) may still be described as a university town, now having a population of about 42,000 inclusive of 7200 students and 1000 university employees and members of their families resident on the Stanford campus. Of the wage earners resident in this community, approximately 27% are employed in San Francisco or other neighboring towns, about 10% are employed by Stanford University, and about 22% by light industries in this area. The remainder are engaged in the manifold activities characteristic of such communities. There is no heavy industry in the area.

The survey of food prices referred to here has been made among the retail stores in Palo Alto, in all cases during the 3rd or 4th week of May. Year by year the same items were priced. To give a proper weighting to the list, the quantities of various foodstuffs required for a "liberal" diet were used. The cost of such a diet was determined for one week's maintenance of an adult man engaged in moderate physical activity. It is recognized, of course, that many different liberal diets could be devised, though all would be characterized, according to present concepts, by being comparatively low in potatoes and highly processed cereals and comparatively rich in so-called high quality protein foods. The particular diet that we have priced contains an abundance of dairy products, fresh fruits and vegetables, and high quality proteins. It is not, however, a "luxury" diet. Differences in regional dietary practices or in availability of foodstuffs would permit many variations without serious trespass upon the limiting characteristics of a liberal diet. The particular foods about which these surveys have centered would provide, per day, approximately 3100 Cal, 137 g fat, 318 g carbohydrate, 107 g of protein, 1.36 g calcium, 2.04 g phosphorus, 20 mg iron, 15,000 units of vitamin A or its equivalent, 160 mg ascorbic acid, 370 units of vitamin D, 1.4 mg of thiamin, and 2.7 mg of riboflavin. These values refer to the food as purchased and should be reduced by probably 10% to

reflect the values for food as consumed. The list of foods, per adult per week, is as follows:

Bread	1 lb	Sweet potatoes	1 lb
Oatmeal	0.5 "	Potatoes	3 "
Cornmeal	0.5 "	Cabbage	2 "
Sugar	1.2 "	Lettuce	0.5 "
Milk	3.5 qt	Carrots	1 "
Cheese	0.75 lb	Beets	1 "
Butter	0.5 "	Canned corn	0.5 "
Eggs (large, grade A)	1 "	Oranges	2 "
Lard	0.25 "	Apples	1 "
Bacon	0.25 "	Bananas	1 "
Beef chuck roast	2.5 "	Dried prunes	0.5 "
Salmon	1 "	Canned peaches	0.5 "

Five stores were included in the 1939 survey, 6 in 1940, 7 in 1941, 9 in 1942 to 1952, and 8 in 1953. Three of the stores in the 1939 list and four in the subsequent lists are members of chains. A large co-operative store was included. All small stores were deliberately omitted, as well as one or two stores that cater to luxury trade and are recognized as atypical with respect to distribution costs and retail prices.

In the case of canned goods, the cheapest brands were priced. It is believed that the nutritive qualities were reasonably comparable. To obtain maximum economies in purchasing, quantity prices (up to 10 lb) were used, whenever feasible, as the basis for the calculations (Table 1).

The increases reported since 1939 are not to be considered as indicative of the extent to which the cost of living has increased. This is because cost of living indices include many items other than food and also because liberal diets are low in cereal products (which have increased the least) and rich in fresh vegetables, fruits, fish, eggs, and meat. For example, while bread, sugar, milk, and oatmeal have approximately doubled in price since 1939, the present prices of beef, cheese, butter, and eggs are about three times those of 1939; garden vegetables and potatoes are 3 to 4 times as costly as in the base year; and canned salmon, prunes, and apples are 5 to 6 times as expensive.

TABLE 1

Year	Average cost at retail price	Percentage increase over 1939
1939	\$2.28	
1940	2.28	0
1941	2.96	30
1942	3.59	57
1943	4.72	107
1944	4.26	87
1945	4.26	87
1946	4.40	93
1947	5.96	161
1948	6.81	199
1949	6.58	189
1950	6.10	166
1951	7.07	210
1952	7.04	209
1953	6.65	190

The prices used for carrots and beets are those for the trimmed vegetables and represent strictly the cost of the edible portion. It is unfortunate that in most cases retail stores still continue to sell these by archaic standards: by the bunch rather than by net weight.

Since fortified margarine is now to be regarded as an acceptable substitute for butter, and tinned mackerel is considerably cheaper than tinned salmon, even though somewhat lower in vitamin A, we have decided in the future to substitute these two items for butter and tinned salmon, respectively, in these dietary surveys. The hamburger now available locally appears to be of higher quality than that sold in 1939, although in composition it is not yet satisfactorily defined. Nonetheless, it is widely consumed. If the list of foods published above were to be amended by the replacement of butter and chuck roast of beef with margarine and hamburger, respectively, the cost of the liberal diet would fall from \$6.65 to \$5.74 for 1953.

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## Description of a New Technique for Rearing Polychaetous Annelids to Sexual Maturity<sup>1</sup>

THE maintenance of developing larvae has been a major problem in life history studies of polychaetous annelids. Many techniques have been devised in the past to overcome it, e.g., the use of finger bowls (1), a plankton net sea cage (2), a balanced aquarium to which diatom cultures are added (3), and the plunger jar system (4).

The technique employed by the author utilized the principle of simulation of the natural current conditions. Three to four gallons of sea water were added to a five-gallon all-glass aquarium. Circulation of the sea water was effected by two aquaria stones connected by rubber tubes to a compressed air system and placed at opposite sides of the jar. The aquaria stones break the compressed air into fine bubbles that serve as a means of aerating and circulating the water. In this manner the water was in continuous circulation, which kept the larvae off the bottom and free from attack by bacteria and protozoa. Sea water was collected, filtered, and stored at 4-6° C until needed. The temperature of the water in the aquarium ranged from 18° to 22° C.

Cleaving eggs or trochophores of the polychaete worm, *Nereis grubei* Kinberg, are placed in the aquarium. By the time the larvae are ready to feed, about 2 weeks after fertilization, sufficient diatom growth is present. Dried, ground mussel gonad and thalli of green algae are added periodically to assure

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