Twenty-seven male albino rats (Wistar strain) weighing 200 gm each and 8 male rats of mixed strains weighing 200–400 gm each were used. The Wistar rats were lightly anesthetized with ether and 0.25 ml of blood obtained by cardiac puncture, using a 27-gage needle. Immediately afterward, peripheral blood was obtained by nicking one of the dorsal tail veins with a sharp razor blade and collecting the free-flowing blood.

47–49) have demonstrated that restraint induces a lymphocytopenia in mice. The animals were kept at all times in an air-conditioned room at a temperature of 78 ± 3° F.

Total leucocyte counts were made by standard methods, using Bureau of Standards certified equipment. Monocytes were not distinguished from lymphocytes, nor were eosinophils and basophils from the neutrophils.

TABLE 1

LEUCOCYTE COUNTS OF HEART BLOOD AND PERIPHERAL BLOOD OF THE RAT

| Animals | Source of blood | Total leucocytes/mm³ | Neutrophils/mm³ | Lymphocytes/mm³ | |
|---|---|---|---|---|---|
| | | | | Normal | After adrenal-cortical extract |
| 18 Wistar rats | Heart | 28,055 ± 782* | 6,892 ± 569 | 21,163 ± 568 | 12,693 ± 671 |
| | Tail | 28,166 ± 773 | 5,432 ± 364 | 22,732 ± 550 | 13,582 ± 731 |
| 9 Wistar rats | | | | Normal | After saline |
| | Heart | 25,044 ± 624 | 4,488 ± 347 | 20,556 ± 872 | 19,467 ± 612 |
| | Tail | 25,122 ± 830 | 4,272 ± 383 | 20,851 ± 959 | 20,489 ± 347 |
| 4 mongrel rats | | Killed by blow on head | | | |
| | Heart | 21,800 ± 374 | 3,706 ± 299 | 18,094 ± 397 | |
| | Tail | 24,400 ± 867 | 3,416 ± 597 | 20,984 ± 540 | |
| 4 mongrel rats | | Cardiac puncture on exposed heart | | | |
| | Heart | 21,276 ± 619 | 3,627 ± 774 | 17,659 ± 246 | |
| | Tail | 22,270 ± 772 | 3,194 ± 611 | 19,576 ± 906 | |

* Standard error $= \pm\sqrt{\frac{\Sigma d^2}{n(n-1)}}$.

In order to determine whether heart blood and peripheral blood lymphocyte counts are affected equally by agents known to alter the lymphocyte count, 18 of the Wistar rats were given 2-ml subcutaneous injections of aqueous adrenal-cortical extract (Wilson), and the other 9 were given 2-ml subcutaneous injections of saline.

Four of the mongrel rats were killed by a blow on the head after the manner of Quimby, Saxon, and Goff and samples of heart and tail blood obtained. The other 4 mongrel rats were deeply anesthetized with ether, the heart was exposed, and blood samples were obtained directly from the beating ventricle.

Extreme care was observed in handling the animals, since Elmadjian and Pincus (*Endocrinology*, 1945, 37,

All of the data are presented in Table 1. It is apparent that there was not a statistically significant difference between the leucocyte counts of the heart blood and tail blood. The lymphocytopenia following injection of adrenal-cortical extract was of the same order of magnitude as that reported by Dougherty and White (*Endocrinology*, 1944, 35, 1–44) and was of comparable magnitude in heart blood and tail blood.

We are unable to explain the difference between our results and those of Quimby, Saxon, and Goff.

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## Appeal for Scientific Literature for Austria

During a recent visit to Vienna to attend the 50th Anniversary Meeting of the Austrian Chemical Society, I learned at first hand something about the terrific problems being faced by the U. S. Information Center there. . . . Many of the libraries in Austria have either been destroyed or dispersed. Technical literature was, of course, not available during the war, and it is only returning very slowly now because of the usual difficulties of foreign exchange and world shortages. The U. S. Information Center has accumulated a small technical library, and it receives quite a good selection of current technical journals, but usually only one copy of each. In many instances this is the only copy of the journal in Austria. It takes little imagination to visualize what this means to research workers and teachers. . . . All of us know the past contributions of the Austrian scientists. They can and will contribute much more in the future. Right now they need technical literature of all kinds, standard works for reference and teaching, and current literature for research background.

I want to appeal to everyone who reads this communication to do something, no matter how little, to help out on this problem. If you know an Austrian technical man, take out a subscription for him to some journal in which he is interested. If you do not know anyone personally, send a journal to one of the university or technical high school libraries. If you cannot do this, send your own journals on after you are through with them. Clean out all those old college textbooks you never look at any more. If you have books in German, so much the better, but a high percentage of the technically trained people read English and more are learning all the time, so send anything you have.

The young American woman in charge of all technical literature in the U. S. Information Center in Vienna is Miss Theresa Druml. She is a native of Milwaukee, was educated at Marquette University, and was in the WAVES during the war. . . . She said that any literature on any technical subject that we could send would be useful, and that she would be very happy to index it, sort it, and see that it is equitably distributed to all of the technical schools and universities in Austria. Therefore, if you do not have private addresses to which you can send literature, anything that you can spare should be sent either directly to: Miss Theresa Druml, U. S. Information Center, Kaerntnerstrasse 38, Vienna I, or to her attention at the U. S. Information Center, H.Q. USFA–ISB, APO 777, c/o Postmaster, New York City.

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## On the Recent Frilled Shark Catch

The collection of a specimen of the frilled shark, *Chlamydoselachus anguineus* Garman, off the coast of California last June (see *Science*, July 30, p. 106) is of such an unexpected and significant nature that it deserves wide publicity. Until now, the only known specimens of this relatively rare shark were obtained from Japan and, to a lesser extent, from waters of western Europe.

The shark was caught by Pete Metson of Santa Barbara, fishing from the ship *Ermeony*, on last June 25 (probably), although an accurate record of the day was not made by the fisherman. The catch was made at a depth of 9 or 10 fathoms with a drift net (9½″ mesh when stretched) which had been out all night, and the shark was still alive when pulled in at 11 : 00 A.M. The location was approximately Latitude 34° 23′ N., Longitude 121° 03′ W., which is about 22 miles south by west from Point Arguello, Santa Barbara County, California, in water 750 fathoms deep. The specimen was eviscerated as soon as it was caught, then placed on ice, and frozen a few days later when brought ashore at Santa Barbara. It was partially thawed during each of three successive days when on display at the Santa Barbara Museum of Natural History.

The shark is now preserved at the California Academy of Sciences, Golden Gate Park, San Francisco. The following measurements and much of the above data were obtained from W. I. Follett, of the California Academy (the measurements were made before preservation): sex, female; total length, 1,708 mm (my original note of 1,718 mm was made several days before the animal arrived in San Francisco, and the discrepancy can be accounted for by shrinkage); thickness of body, ca. 75 mm; head, 167 mm; tip of snout to post. margin of 6th gill flap, 256 mm; tip of snout to rictus, 117 mm; tip of mandible to rictus, 117 mm; tip of snout to dorsal origin, 1,127 mm, to pectoral origin, 261 mm, to pelvic origin, ca. 889 mm, to anal origin, 1,099 mm; rows of teeth, 12–0–13 (upper), 11–1–11 (lower); teeth predominantly 5 in each row.

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## Vitamin A Content of the Liver of the Frilled Shark

In a recent note in *Science* (July 30, p. 106) the occurrence of a female specimen of the frilled shark, *Chlamydoselachus anguineus* Garman 1884, off the coast of Santa Barbara, California, was reported. The vitamin A content of the liver of this rare species does not appear in the literature available to the writer; it seemed of interest, therefore, to record the available data on this specimen. The liver of the shark was an exceedingly friable, flesh-colored organ weighing 2,370 gm and containing 72% oil. Analysis of the oil in an electronic photometer equipped with a filter transmitting in the region of 328 μ yielded a value of 620 International Units/gm of oil.

While data from a single animal is of little significance, it is interesting to note that the vitamin A value here recorded is lower than that for any female shark in the list of species compiled by Springer and French (*Ind. eng. Chem.*, 1944, 36, 190–191) and compares more closely in order of magnitude with the vitamin A potency of liver oils from the rays and manta.

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