vine stress test becomes positive and to standardize the technique for the test in the rabbit.

In summary, data in the cholesterol-fed rabbit show marked correlation of positivity of the ergonovine stress test with occlusive atherosclerosis of the small coronary arteries and myocardial damage. It is suggested that the ergonovine stress test may provide a new experimental procedure for the study of coronary atherosclerosis in the living animal. The data are in accord with the previously reported correlation of a positive ergonovine test with clinical evidences of coronary artery disease in man.

References and Notes

1. S. H. Rinzler and J. Travell, *Am. Heart J.* **35**, 248 (1948); S. H. Rinzler *et al., Proc. Soc. Exptl. Biol. Med.* **85**, 329 (1954).
2. I. Stein, *Am. Heart J.* **37**, 36 (1949); I. Stein and J. Weinstein, *J. Lab. Clin. Med.* **36**, 66 (1950).
3. A. Steiner, personal communication (9 Apr. 1954).
4. J. Stamler, personal communication (27 Oct. 1954).

5. This investigation was supported by grants from the National Heart Institute, National Institutes of Health, U.S. Public Health Service, grant No. H493(C5), and the Josiah Macy, Jr., Foundation. The technical assistance of Diana Charleson is gratefully acknowledged.

6. These rabbits were made available to us by Herald Cox, department of viral and rickettsial research, Lederle Laboratories, Pearl River, N.Y.
7. Tracings were taken on each animal with both the Sanborn visocardiette and twin-beam electrocardiograph.
8. Supplied by Burroughs-Wellcome Co., Tuckahoe, N.Y.

9. Acknowledgment is made to J. B. Logan, Lederle Laboratories, for the determinations.

10. D. Kritchevsky *et al., Circulation Research* **2**, 340 (1954).
11. N. Anitschkow, in *Arteriosclerosis* (Macmillan, New York, 1933), p. 271.

2 March 1955.

Communications

Isolation of Anaerogenic *E. coli* 026:B6 Serotype from a Case of Calf Scours

The *Escherichia coli* serotypes most commonly associated with infantile gastroenteritis are 0111:B4, 055:B5, and 026:B6. The latter two serotypes have been reported in case of animal diarrheas. Ørskov (*1*) and Smith (*2*) identified three fermentation types of the *E. coli* 026:B6 group that were isolated from autopsies of newborn calves that died from calf (white) scours. Fey (*3*), isolated *E. coli* 026:B6 from calves suffering from septicemia and dysentery and from cattle with mastitis. Ulbrich (*4*) reported the 055:B6 serotype from fatal cases of scours.

During the past year extensive investigation (*5*) of coliform strains present in the intestinal tract of healthy and diseased calves has been undertaken. One strain, 125M, was isolated at autopsy from the ileum of a calf that died of a severe case of scours.

The biochemical reactions of this strain were determined by inoculating phenol red broth containing 0.5 percent of the sugars and incubating for 96 hr at 37°C. Acid only was formed from dextrose, lactose, maltose, mannitol, xylose, arabinose, sorbitol, and sucrose. Adonitol, dulcitol, rhamnose, and inositol were not fermented. The reaction in salicin was variable. The methyl red and indole tests were positive, while Voges-Proskauer, citrate, and urea reactions were negative. Nitrite was reduced to nitrate but hydrogen sulfide was not formed.

The serological typing of the original culture (125M) and a culture (204D) isolated after successful calf passage was carried out by W. H. Ewing of the Communicable Disease Center, Chamblee, Georgia. Both cultures were reported as the anaerogenic *E. coli* serotype 026:B6.

Several successful passages in young calves have been made. The culture produced a fatal case of scours in three calves when it was fed to them by mouth. Control calves raised under the same management conditions remained normal.

This strain of *E. coli* is identical, biochemically and serologically, with Ørskov's anaerogenic type 3 (*1*) and is believed to be the first reported in calves outside of Europe.

PAUL J. GLANTZ
HOWARD W. DUNNE

Veterinary Science Department,
Pennsylvania State University, University Park

References and Note

1. Frits Ørskov, *Acta Pathol. Microbiol. Scand.* **29**, 373 (1951).
2. L. DS. Smith, personal communication, 1955.
3. H. Fey, *Excerpta Med.* Sect. IV **7**, 10 (1954).
4. F. Ulbrich, *Vet. Bull.* **25** (1955).

5. Publication of this report as paper No. 1949 in the Journal Series of the Pennsylvania Agricultural Experiment Station was authorized 23 Feb. 1955.

4 March 1955.

Use of Centralized and Departmental Libraries in College and University Geology Instruction

Three years ago I sent a questionnaire to 88 geology departments in the United States and Canada asking whether centralized or departmental library facilities were preferred and why. The same study has been made in chemistry by Broberg and Dunbar (*1*) with similar results.

I received 80 answers, a good return on my questionnaire, with the last questionnaire coming in a year and a half ago (*2*). In spite of my delay in reporting the results, I feel that the data are still generally valid and, hence, should be presented now.

The questionnaire included the items in sections 1 to 4 of Table 1. The data in section 5 were compiled from answers to sections 1 to 4 and to the following

Table 1. Summary of information gathered from questionnaires (*4*).

Question	0–25 geology majors				26–100 geology majors						100 geology majors				Totals	
Section 1 Total enrollment of school	< 2000		2000–10,000		< 2000		2000–10,000		> 10,000		< 2000	2000–10,000	> 10,000			
Public or private support for school. (Numbers show number of schools; letters indicate items as plotted on graph)	Pub. (3) (a)	Pri. (7) (b)	Pub. (4) (c)	Pri. (4) (d)	Pub. (5) (e)	Pri. (2) (f)	Pub. (14) (g)	Pri. (11) (h)	Pub. (5) (i)	Pri. (5) (j)	Pub. (1) (k)	Pub. (9) (l)	Pub. (8) (m)	Pri. (2) (n)	Pub. (49) (o)	Pri. (31) (p)
Section 2																
All materials in main library	1	2	1		2		5	1			1	3	1		14	3
More than half of materials in main library	1	1	2	1	1	1	2	4	1			1			8	7
Less than half of materials in main library	1		1	2			4	3	2	4		1	4	1	13	10
All materials in departmental library		3		1	2	1	3	3	2	1		4	3	1	14	10
Section 3																
Prefer materials in main library	1	1	1		1		5	1			1	1	1		11	2
Mostly in main library	1	1	1	1		1	1					1			4	3
Mostly in departmental library		2	2	2	1		3	4	3	1		2	2		13	9
Prefer materials in departmental library	1	3		1	2	1	5	5	2	4		5	5	2	20	16
Section 4																
Central library recommended by survey		1						1				1			1	2
Departmental library recommended by survey				1								2	1		3	1
Section 5																
Departmental library favored and used	1	3	1	2	2	1	8	7	4	5		6	7	2	29	20
Departmental library favored but not used	2	1	1		1		2	1	1			2			9	2
Science division library favored or used		1		1	1		1	2							2	4
Central library favored and used		2	2	1	1	1	3	1			1	1	1		9	5

statement: "If you particularly favor departmental libraries over centralized libraries in geology, or vice versa, and care to note your reasons, please do so."

Table 1 lists the types of libraries, number of geology majors, and total enrollment in the school, as well as whether the school is publicly or privately supported. In most categories the preference is for departmental libraries. The preference and/or use of centralized libraries is most common in schools with small total enrollment and/or small number of geology majors, as is shown by the graph in Fig. 1. An important variable not considered in the questionnaire is the distance from the library to the geology department. One reason for centralized library preference was the nearness of the library building to the geology department; in several instances geology was in the same building as the library. Conversely, several answers quoted the long distance to the main library as a reason for departmental libraries.

Some of the reasons given for preference of centralized libraries include the following (*3*). (i) The general integrated undergraduate courses in small colleges require access to books in several fields, and this is hindered if the books are scattered in departmental libraries. (ii) Centralized libraries reduce book losses, are more convenient, and give better service over a longer day. (iii) No room is available for departmental libraries, and no funds are available to staff them. (iv) Duplication of staff and materials is reduced. (v) Materials in allied fields are more readily available.

Some of the reasons given for preference of departmental libraries include the following. (i) They are more convenient and save staff and students much time. (ii) The availability of departmental libraries encourages students to browse through books and journals in their spare time. (iii) Research laboratories and library form a unit that cannot be divided

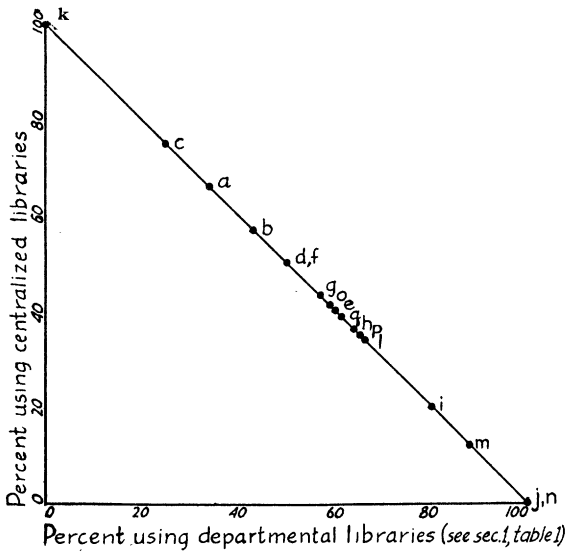

Fig. 1. Comparison of the number of geology departments that have departmental libraries with the number of geology departments that have other types of libraries. Grand total of 80 schools, q; all other letters are explained in Table 1.

without loss. (iv) The informality and convenience of departmental libraries promotes investigation and research. (v) Departmental libraries bring together scattered references in a field of study and increase efficiency.

In summary, 75 percent of the 80 schools that answered the questionnaire have departmental libraries or favor them. Schools with centralized libraries total 17½ percent, and schools with science division libraries total 7½ percent. No school with a departmental library indicated a preference for a centralized library, but one had shifted in the past to a centralized library because of book losses.

If the main university library is near the geology department, or if funds are not available for departmental libraries, a centralized library is preferred. If the campus is large, and/or if the geology department has a large faculty and graduate school, a departmental library is usually preferred, but there are a few notable exceptions. Convenience and time saved were the main arguments for departmental libraries. Most schools specified that departmental libraries must be properly staffed. Some schools report that science division libraries are very satisfactory. No conclusions can be drawn from the results of the very few library surveys that have been conducted by library experts.

It is my conclusion that, inasmuch as libraries exist chiefly to serve students and faculty, they should be located where they will serve best. If funds are available, the location will generally be in the department.

FRED S. HONKALA

Department of Geology,
Montana State University, Missoula

References and Notes

1. J. W. Broberg and R. E. Dunbar, *J. Chem. Educ.* **28**, 435 (1951).
2. I wish to thank everyone concerned for the fine response.
3. Permission to quote by school name was given in most of the questionnaires, but lack of space precluded complete quotations.
4. In some instances the questionnaires were not filled out completely. Therefore the number of answers may not equal the number of schools.

24 March 1955.

Some Aspects of State Academy of Science Publications

More than 50 years ago, J. McKeen Cattell made the following remarks concerning academy publications as a whole (*1*).

> Proceedings and transactions were an important function of an academy of the eighteenth century, but there is no longer any excuse for presenting researches on utterly diverse subjects in one volume, because the authors happen to be members of the same academy. We might as well make up volumes according to the cranial index of the contributors. The national society for each science should directly or indirectly have charge of the publications of that science.

Although these words have been generally ignored, it is especially unfortunate that this bibliographic schizophrenia still exists in many journals of limited audience at the state academy of science level.

Subsequent writers (*2–8*) have concerned themselves with what should be included in the journals or with the mechanics or encouragement of publication and have taken it for granted that the academy should have its "transactions." That there are now about 35 academies sponsoring publications indicates the apparent importance of this feature of an academy's activities.

Little in the way of comparative study has been done to evaluate the position of these journals in scientific literature. Yet their value could be gaged in part by the quality of papers that academy members submit to each academy journal, as compared with the articles that they send to other journals. Not long ago, I had an opportunity to examine recent consecutive volumes of 30 academy publications with respect to contents, format, frequency, and other details. Among the journals containing original papers, three groups may be distinguished: (i) the irregular journal devoted exclusively to full-length papers, (ii) the usually annual journal containing both transactions and original papers or abstracts of papers given at the annual meeting, the "typical" academy journal, and (iii) the quarterly or bimonthly journal having some or all the earmarks of a general science periodical. The features of the third group, which is composed of relatively newer publications, indicate a possible trend toward a more modern approach in presenting science to the citizen of the state.

Considering the contents of the 30 publications, of