Biopsy samples of normal and diabetic muscle were removed from rabbits under dial anesthesia. Thin strips approximately 1/16 in. thick and weighing from 0.2 to 0.4 g were separated from the biceps femoris muscle with as little fiber damage as possible. These were placed in Krebs Ringer phosphate (*9*) in the refrigerator for 1½ to 2 hr in order to insure a resting metabolic rate. Their O_2 consumption was then measured in Warburg vessels under four conditions: control of Krebs Ringer phosphate; insulin (1 IU per milliliter Ringer) (*10*); 0.01*M* sodium citrate; and insulin and citrate combined. The muscle was allowed to respire for 1 hr before and for 3 hr after dumping. To obtain diabetic muscle, rabbits were injected (*11*) with alloxan (300 mg/kg) and used after 1 wk if their blood glucose was then in excess of 300 mg percent.

The data for normal and diabetic animals are summarized in Table 1 and are shown graphically in Fig. 1. All figures are the averages of the results of 15 experiments with the standard deviation in each case appearing in brackets and the standard error quoted as the ± figure. These data indicate several things:

1) There does not seem to be any significant difference between the O_2 consumption of normal and diabetic muscle.

2) The O_2 consumption falls off slightly with time in both cases, but in neither is this fall significant.

3) The effect of insulin varies between normal and diabetic muscle. In the former there is an apparent stimulation of approximately 22 percent, which, however, is not statistically significant. In diabetic muscle, however, the O_2 consumption is increaesd by 63 percent of the control rate, which *is* significant.

4) Citrate has the same effect in both cases—a significant stimulation of the O_2 consumption of better than 60 percent of the control rate in each case.

5) Insulin in the presence of citrate has no effect on normal muscle. It appears, therefore, that in this case citrate and not insulin is the limiting factor. In diabetic muscle, however, the insulin and citrate combination increases the O_2 consumption by 127 percent of the control rate—a further increase of 66 percent over that caused by citrate alone.

The foregoing data indicate a real difference in the response of normal and diabetic muscle to insulin. The O_2 consumption of normal rabbit muscle slices is not affected by insulin. The O_2 consumption of diabetic rabbit muscle slices, on the other hand, is increased more than 60 percent by insulin, either alone or in the presence of citrate. Further investigations of this action of insulin are being carried out.

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Received March 1, 1954.

Communications

"Myiasis" Resulting from the Use of the Aspirator Method in the Collection of Insects

During the past two summers I have served as research entomologist at the Arctic Research Laboratory, Point Barrow, Alaska. Since the insect fauna is composed largely of small-sized insects, such as gnats, midges, anthomyid flies, rove beetles, Collembola and wasps parasitic upon the flies, considerable use was made of the aspirator method of collecting. Apparently because of the use of the aspirator, a most unique case of "myiasis" (or infestation) occurred.

The aspirator, an apparatus generally designed to collect insects by suction, consists of a vial into which is fitted, by means of a stopper, two pieces of copper tubing, one of which is directed toward the insect and the other is attached to a length of rubber tubing, which during use is placed in the operator's mouth. Across the end of the copper tubing leading to the operator's mouth a fine mesh brass screen is secured. This, of course, is to prevent the aspirated insects from being drawn out of the vial and yet provide a free airway between the insect being aspirated and the operator. This apparatus has been widely used by entomologists, particularly the dipterists, for the collection of insects that are not so readily collected by other means.

Approximately 2 mo after the completion of the past summer's work at Point Barrow I became ill. During the week following the onset of illness four major groups of insects (Coleoptera, Collembola, Diptera, Hymenoptera) were passed alive from the left antrum of the sinus. These insects included three adult rove beetles (Staphylinidae), *Micralymna brevilingue* Schiødte; 13 fungus gnat larvae (Mycetophilidae), *Boletina birulai* (Lundstrom); three egg parasitic wasps (Mymaridae), *Mymar* sp.; and about 50 springtails (Collembola), *Isotoma olivacea* Tullberg. The medical aspects, as well as the specific identification of the insects involved, are to be reported by Donald G. Casterline, M.D. [*Calif. Mo. Medicine,* in press].

At Point Barrow I was engaged in studies that made it necessary to obtain both qualitative and quantitative data on the insect fauna. Thus, in order to follow the seasonal progression of this fauna, composed essentially of small-sized insects, daily periods of aspiration approximated 4 to 6 hr. It is believed that these protracted periods of daily aspiration during the summer contributed to a case of "myiasis" that is without parallel in its origin and nature. Insofar as I have been able to ascertain none of the insects reported herein have been previously shown to cause "myiasis" in man.

Since it is likely that the aspirator will continue to be an important means for the collection of small-sized insects, I would like to suggest that those persons who utilize this apparatus so modify it that the flow of air will not be toward the operator's mouth. Apparently the insects gained access to the sinus as eggs which passed through the fine mesh brass screen. Admittedly, it is almost unbelievable that the insects should have undergone several stages in their metamorphosis within the sinuses, but since the screen was so fine as to preclude the possibility of the aspiration of adult insects, it must be concluded that such was the case.

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Received May 7, 1954.

Nuclear Emulsions for Electron Microscopy

In our recent article [*Science* **119**, 441 (1954)] describing the use of Ilford nuclear emulsions in gel form, we should have given the number of the emulsion as G-5 rather than C-2. As a matter of interest, Ilford Limited, (Ilford, London, Eng.) will supply the C-2 as well as other nuclear emulsions in gel form upon request.

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Received May 6, 1954.

Scientists' Definition of Public Relations Not Scientific

In a recent issue of *Science* [**118**, 420 (1953)] there was an excellent article on "Science and public relations" by Herbert Curl and Nicholas Rescher of the Marine Corps Institute. The introductory paragraphs and such phrases as "science cannot afford the risks of isolation or misunderstanding" were well put. The half-dozen illustrations, which "have a portentous aggregate effect," accurately portrayed some segments of the total problem—lack of effective two-way communication between the nonscientist and the scientist.

Some general suggestions were made to improve the situation. First, emphasis was placed on the role of the individual scientist in his community by taking full advantage of his nonscience contacts to improve the public regard for science's contribution to society. Curl and Rescher's key solution lay in "the formation of a single, nonprofit, non-Government institute, without partisan political affiliations, whose sole aim would be the improvement of the public relations of science." This was advocated to "best utilize the power of effectively coordinated information."

Unfortunately, however, the description of this institute was followed by this statement: "It should employ the tools of modern public relations without succumbing to its methods or aims."

As one who is dedicated to helping interpret the medical sciences to the American public and one who is intent on helping build up the professional status of public relations, I dislike the phrase "without succumbing to its methods or aims." I believe that, to most scientists this phrase reads: "We do not believe in newspaper headline grabbing or publicity stunts (methods) as a means of giving the scientific world and its personnel undue popularity (aims)."

We must first differentiate between the general use of the term "public relations" and its application to the duties of "public relations" personnel. Actually, there is no necessary connection. The first has come to mean to do what is good, intelligent, kind, courteous, and appropriate. The second refers to the task of writing, exhibiting, speaking, and so forth, or to use a more inclusive term, communicating.

Just as the scientist makes sure that his findings are accurately, honestly, and truthfully communicated to his associates and placed in the literature, so the public relations man seeks to convey accurately to the public the concepts, disciplines, successes, problems, and workings of science. Such information will contribute to the understanding on the part of people for the role of true science in today's society.

As science seeks the aid and assistance of competent public relations people, the latter are duty-bound to promote the use of such communication channels and techniques as are acceptable to the scientific world. In other words, public relations activities in science *are not* being handled properly if they do an injustice to the concepts and disciplines that have made science an important contributor to society's welfare. This fact constitutes the greatest challenge to public relations personnel working in the sciences.

A balanced approach to the problem of communicating science and its role to the masses will ultimately be found when education, research, and medical centers throughout the nation approach the problem as industry is doing—that is, by developing communications at the local or community level. A national institute will aid in telling the story of science, but obviously a grass-root approach at every center where there is a concentration of scientists will do what a national organization cannot. A local community program can and should include internal communications within the institution, guided tours for selected groups, speakers' bureaus, open-house events, external publications for the nonscientist, exhibits at public libraries and county fairs, and localized TV, radio, and press features.