

the care of especially trained librarians), which M. Avias suggests? I think not.

If I find that a potentially interesting article has appeared, say, in the *Doklady* of the Russian Academy of Sciences, which we do not have in Delaware, am I blocked in my research unless some law compels the academy to provide me with a 3" x 5" card bearing an abstract in Spanish? Not at all. I go across the street to our librarian, ask him to borrow this issue for me on interlibrary loan, and he does so, with no fuss and little delay, because the librarians of this continent have pooled information on their holdings and accessions, and have agreed to lend to one another books needed for scholarly work. There are no laws and no top-heavy organization, but practically any book in existence is available to any worker, no matter how small or inadequate his local library may be. I can imagine no bureaucratic center for documentation serving scientists more efficiently, more smoothly, and more cheaply than our librarians now do.

For my European colleagues may I add, this is possible not only in a country with many libraries and no hampering political boundaries. While I was working in Canada, I could borrow books as readily from Harvard as I now can in Ohio.

Let us look around and see what has been accomplished by cooperation, and let us work to make this cooperation more effective. Without arrogance but with pride, let us show the results to those who claim that only through compulsion can scientific work flourish.

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## Has He a Rival?

WHO was the youngest person ever elected to membership in the AAAS? Probably it was William Fellowes Morgan, a grandnephew of Lewis Henry Morgan, the father of American anthropology.

The January 1945 *AAAS Bulletin* contains an article entitled "The Six Patriarchs of the Association," listing six members (at that time all deceased but one) each of whom had been members of the Association for at least 64 years.

One of the six is William Fellowes Morgan (1860-1943), who was a member of the AAAS for 65 years. He was elected a member in August 1878, when he was only 17 years old (his 18th birthday was on the following September 24). He was probably the youngest member the AAAS has ever had. He was elected a fellow of the AAAS in 1932 and an emeritus life member in 1933. He was associated with Section M. In 1880, William Fellowes Morgan was a member of the Association while his granduncle was president.

In addition to blood relationship and membership in the AAAS, William Fellowes Morgan and Lewis Henry Morgan were both successful businessmen and both trustees of Wells College. In 1868, the year that

Wells College (founded by Henry Wells, who was also a founder of Wells, Fargo & Co. just a century ago) opened, Lewis Henry Morgan was elected a trustee and served until his death in 1881. William Fellowes Morgan was a trustee for 25 years, for 13 of which (1927-39) he was chairman of the board.

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## Express Rates or Animals?

THE Railway Express Co. has applied to the Interstate Commerce Commission for another rate increase, of 25%. Since shipments by Railway Express of live materials, especially of mammals, are already penalized with twice the first-class rate, to which several increases during the past few years have been added, it will be a very costly proposition for researchers to use Railway Express.

So that the increase shall not be irrevocably passed by the Interstate Commerce Commission, I would like to call the bad situation to your attention, with the suggestion that you might alert colleges, universities, hospitals, and medical schools so that protests are made *in time*.

The rates are absolutely unreasonable. I get many complaints about the high costs of live research materials, but the doctors do not realize that in many shipments the railway expressing costs are higher than our materials. The Railway Express Co. should be brought to reduce the rate to that of other common materials or assume responsibility for proper handling—then the rate increase might be justified.

Unfortunately, we cannot ship large mammals by Air Express because the embargoes have been revoked only for smaller shipments. What is needed is stiff competition, so that they would have to give better service instead of asking for one increase in rates after another.

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## Reactions with *p*-Quinone Imides

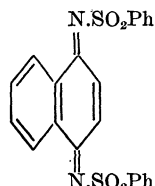
RECENTLY, Adams and co-workers (1) have studied the additive reactions of *p*-quinone imides—e.g., with thiophenol, amines, various organic acids, and aromatic hydrocarbons.

As far as we are aware, the action of the Grignard reagents on *p*-quinone imides has not been investigated. We have found that 1:4-naphthoquinone dibenzenesulphonimide (II) reacts in an analogous way with ethyl- and phenylmagnesium halides to form the colorless additive products (mp 186°) from benzene (C, 61.7%; H, 4.7%; N, 5.9%; S, 13.5%; C<sub>24</sub>H<sub>22</sub>N<sub>2</sub>O<sub>4</sub>S<sub>2</sub> requires C, 61.8%; H, 4.7%; N, 6.0%; S, 13.7%), (mp 220°) from benzene (C, 63.5%; H, 4.5%; N, 4.6%; S, 10.7%; C<sub>28</sub>H<sub>22</sub>N<sub>2</sub>O<sub>4</sub>S<sub>2</sub>, C<sub>6</sub>H<sub>6</sub> requires C, 68.9%; H, 4.7%; N, 4.7%; S, 10.8%), respectively. *p*-Quinone dibenzenesulphonimide (Ia),

2-chloro-1 : 4-naphthoquinone dibenzenesulphonimide and *p*-quinone dibenzimide (Ib) undergo reduction to their corresponding amides when allowed to react with methyl- and ethylmagnesium halides. The reduction of the C=N by the Grignard solutions is a new example of the reducing action of Grignard reagent. (Ia<sub>1</sub>) (Ib), and (II) are readily reduced by magnesium-magnesium iodide mixture to the corresponding *p*-quinone amides.



Ia, R = SO<sub>2</sub>Ph; Ib, R = COPh



II

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### Removal of Soft Parts of Snails by Freezing

THE troublesome problem of removing soft parts of fresh-water gastropods from their shells may be solved by using the following simple technique, which has not been previously reported. The living specimen, covered with water in a stoppered lip or shell vial, is placed in a freezing unit. After the water has frozen completely, the vial is removed to permit thawing at room temperature. The soft parts can then be extracted easily with forceps or dissecting needles.

The method was used successfully on many scores of specimens representing twelve species of fresh-water gastropods. Its advantages over previously reported methods (1) are: (1) soft parts may be removed *in toto*, (2) the viscera remain intact for possible morphological study, and (3) radulae and jaws are easily expelled by gentle downward pressure with a dissecting needle on the dorsal, posterior portion of the cephalic region.

The method is an improvement over those used by former workers in the field.

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### A Rapid Technique for the Diagnosis of Intestinal Protozoa<sup>1</sup>

FOR the past several months a new and simple technique for the rapid diagnosis of intestinal protozoa in feces with a single solution (tincture Metaphen, Abbott—tinted alcohol-acetone aqueous solution, 1:200) has been on trial in the parasitology laboratory of this activity. Because of the excellent results obtained, it is believed to be superior to other wet-staining techniques currently in use. With this method both the cysts and trophozoites of the intestinal protozoa can be clearly demonstrated.

The technique is as follows: A drop of stain, not diluted with saline or other solution, is placed on a glass microslide. A small particle of feces is stirred in until a smooth emulsion is formed. It is now ready to be examined under the low-power objective, the protozoa being readily detected, as they appear highly refractile. It is then necessary to change to either high dry or oil immersion for finer detail of the organism; high dry is usually sufficient. Better results are obtained when the feces are fresh, yet even formalin-preserved specimens are readily stained.

With this stain the nuclear and cytoplasmic details of the cysts are readily diagnostic. The cytoplasm assumes a greenish-yellow coloration, and the nuclei are in distinct contrast, with the jet-black granules of the nuclear ring clearly defined. The karyosome is likewise well demonstrated, this being of value in the differentiation of *Endamoeba coli* and *E. histolytica*. Chromatoid bars are clear and distinct.

The staining characteristics of the trophozoites are similar to that of the cysts. The pseudopodia are immediately fixed upon contact with the stain. Ingested erythrocytes and bacteria are in sharp contrast to the surrounding cytoplasm.

Unfortunately, *Dientamoeba fragilis* has not been observed, but the above observations are consistently true for the other ameba of man. The nuclear morphology and flagella of the intestinal flagellates are distinct, this being especially true with *Giardia lamblia*.

The advantages of this stain are multiple. The technique should be of value to all small laboratories, where facilities are limited. Its extreme simplicity allows for a rapid diagnosis of all the intestinal protozoa of man. It has also been found to be diagnostic for the rhabditiform larvae of hookworm and *Strongyloides*. The solution is stable and will not deteriorate on long standing. It is readily available and relatively inexpensive in comparison with other staining solutions.

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<sup>1</sup> The opinions contained in this paper are those of the authors. They are not to be construed as necessarily reflecting the views or the endorsement of the Navy Department.