me a letter from Hawaii, where an insect presumed to be the same is of economic importance, asking for additional information. Since the matter is one of importance to economic entomologists, it may be worth while to state explicitly why Bouché's name can not be used. I have not seen Bouché's original work (1834), but his whole description is quoted by Signoret. In 1875 Signoret received a mealy-bug on pine-apple, which he described, saying that it was probably Bouché's *Coccus bromeliæ*. Since there was already an entirely different *Coccus bromeliæ*, published in 1778 (now called *Diaspis bromeliæ*), it appears that Bouché's name was in any case unavailable. Signoret, uninfluenced by the homonym, was still in considerable doubt as to the identity of his insect, and accordingly gave Bouché's description, so that the reader might form his own opinion. That description is somewhat confusing, but we are told that the fertilized female takes the form of a convex, short, elliptical shield, a little narrower in front. The last abdominal segment is cleft. The females, after an early stage, remain in one place all their lives, unless one tears them off. The insect is common in greenhouses, on various plants. There can, I think, be little doubt that Bouché had before him the Lecaniid *Saissetia hemisphærica* (Targioni, 1867); surely it was not a mealy-bug. In the Fernald Catalogue of Coccidæ there is confused with this *Lecanium bromeliæ* Bouché, grey marbled with brown, which Signoret did not undertake to identify. It was probably *Lecanium hesperidum* (L.).

Another coccid which seems to need discussion is the large Lecaniid of the tulip-tree. Dr. W. E. Britton (Bull. 234, Conn. Agric. Exp. Station) gives a good account of this insect, but calls it *Toumeyella liriodendri* (Gmelin), stating that it was so identified by Sanders, "after a careful study." Gmelin's *Coccus liriodendri* was based on an account by Dr. John Hill, of London, appearing in the *Hamburgisches Magazine* for 1753. Many years ago I borrowed this work from the Library of Congress, and together with Mr. Pergande went over the description. The account is very vague, and contains some apparently inaccurate statements, but it evidently applies to a Lecaniid on the tulip-tree. We concluded at the time that it was not possible to reach a definite decision, and were not in favor of displacing Cook's name *tulipiferæ* (1878). There is no indication that any one has really reconsidered this evidence, and I think the scale should stand as *Toumeyella tulipiferæ* (Cook).

Sanders (*Journ. Economic Entomology*, 1909, p. 432), adopting *Pseudococcus adonidum* (L.) as the name of the common long-tailed mealy-bug (*P. longispinus* Targ.), refers to the "good description of the insect in *Systema Naturæ*, Ed. XII." The "good description" refers to "linea dorsalis longitudinalis elevata . . . area inter lineam dosalem marginemque totidem punctis in seriem longitudinalem dispositis . . . cauda bifida," etc. Conceivably this may be *Orthezia urticæ* (L.), but this is guessing. There is not anything to clearly indicate the mealy-bug, and part of the description contradicts such a reference. I am in favor of using the oldest names when there is real evidence, or even a satisfactory presumption, in their favor, but when the descriptions are inapplicable it is another matter.

The application of the generic name *Coccus* L. to the soft scales may have to be reconsidered. The original Coccus (the word meaning a berry) was the hard round scale of the oak, commonly called *Kermes*. Under the rules, a good argument can be made for considering *Coccus ilicis* L. (*Kermes ilicis*) the type of *Coccus*, on grounds of tautonomy, but there is room for diversity of opinion. *Lecanium pulchrum* King, well redescribed by Marchal (1908), should apparently stand as *L. rufulum* (*Eulecanium alni* var. *rufulum* Ckll.).

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THE DETERMINATION OF FAT IN CREAM

TO THE EDITOR OF SCIENCE: I noticed in SCIENCE for July 7, page 25, an abstract of a paper read before the American Chemical Society by E. G. Mahin and R. H. Carr, entitled "Errors in the determination of fat in cream."

In 1910, the dairy department of Purdue University, under the direction of Professor O. F. Hunziker, head of the department, made

extensive investigations to determine if it is desirable to use any material for eliminating the upper meniscus on the neck of the Babcock testing bottles and after a very extensive experiment, came to the conclusion that for uniform and accurate results of the cream test, the meniscus must be eliminated. The reason for this conclusion was that the color of the test, clearness of fat, amount and direction of light, kind of background of the test bottle, angle from which the test is read, etc., gives a varying meniscus.

A number of experiments were tried out at this station as well as at other experiment stations about this time with different liquids for eliminating the meniscus. Amylalcohol was one of the materials experimented with at this time, but it was found that its fat dissolving properties and the harmful effect of the vapor on the operator made it impracticable for commercial use.

Glymol, which is a white mineral oil, was found not to have the objection of the amylalcohol and at the same time eliminated the meniscus which made an accurate test so difficult. The use of glymol is now being used in practically every state of the Union and its value has been thoroughly proved. The authors of the above mentioned article, while they condemn the use of glymol, make the following statement, "If the latter is added slowly and carefully, little or no error occurs." This kind of criticism may be made of any test, but from our inspection of over 1,800 cream buying stations in Indiana, this last year, in our Creamery License Division, we have found at least 98 per cent. of the testers adding the glymol as it should be added and where the testers fail to comply with the creamery and testers' license law or perform tests that are inaccurate, their license is revoked. In cases where licenses were revoked this last year, our investigations show very conclusively that the incorrect testing was due to intent in practically every case, rather than by faulty methods of testing. In the last sentence of this article, the authors say: "It is conclusively shown that the methods (referring to the use of glymol) is not safe in the hands of the average dairy testers, but the use of amylalcohol for this purpose, substituted for hydrocarbon oils, gives reliable results in all cases." A few tests are sufficient to show that this statement is erroneous. Six samples of cream were used and the test read by adding amylalcohol. The tests were read as soon as the amylalcohol was placed on the test and the six tests averaged 22.2 per cent. After standing ten minutes, the six tests averaged 21.5 per cent, showing very conclusively that the amylalcohol dissolves a portion of the fat and does not give reliable results.

As chairman of the Creamery License Division Board of Indiana, a board which has for its purpose the enforcement of the Indiana testers' license law and the protection of the producer against fraudulent or incorrect tests of milk and cream, I am very anxious to receive all constructive criticisms of our present methods of testing, but under our present methods of checking the cream buying stations in Indiana, it is a most erroneous statement to intimate that ten large creameries in Indiana are beating the producers out of $20,000 worth of cream per year, and any one who is connected with the business and knows conditions in the state would not make such a statement, for it would be impossible under the Indiana creamery and testers' license law. The statements which the investigators have made in the article referred to are not only incorrect truths, but the damage which may result from the distribution of such an article is unlimited.

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DR. LIPMANN'S LABORATORY OF APPLIED PSYCHOLOGY

LETTERS from Dr. Otto Lipmann, of Berlin, state that he is confronted with the necessity of giving up his scientific work unless he finds funds which will allow him to keep on with his laboratory of applied psychology. From the Emergency Society for German and Austrian Science and Art, I have received word that $200 will be voted by it provided that American psychologists will pledge an equal amount. A similar arrangement has been carried out by groups in two other fields.

At the suggestion of President Knight Dun-