

He never dreamed of Cadillacs  
 While on financial skids  
 An Austin was sufficient for  
 His wife and seven kids.

His joy was all in simple things  
 If he had not renown  
 He had the admiration of  
 The man from Provincetown.

And when he was too old to work  
 That brought to him no fear  
 He had a princely pension of  
 One thousand bucks per year.

Bewail, ye winter winds, bewail  
 A breed that is no more  
 For scientists are waking up  
 Today they know the score.

When general practitioners  
 As all can plainly see  
 Can make twelve thousand bucks a year  
 They wonder, why can't we?

And if the goodly businessman  
 Is not destroyed by wealth  
 It's possible, if we had some  
 It would not harm our health.

For freedom from financial stress  
 Might let our ulcers heal  
 And keep our minds on scholarship  
 To aid the common weal.

So let us shed a passing tear  
 For the mighty men of old  
 And keep our minds on higher things  
 But get our share of gold.

JAMES C. BRADDOCK

Department of Zoology  
 Michigan State College, Lansing

## DDT Detoxification Product in American Cockroaches<sup>1</sup>

RECENT studies (1) on the detoxification mechanism of DDT in American Cockroaches have revealed that as much as 55% of DDT injected into the body of a cockroach was converted to an unknown compound which did not respond to the test Shechter's (2) used for detecting DDT, DDE, and some of their derivatives. In this laboratory, 2-C<sup>14</sup>-labeled DDT with a specific activity of approximately 1.5 mc/mM has been synthesized (3) and administered to cockroaches by means of injection. Among 29 of the roaches injected each with 3 µl of ethanol containing 20 µg of radioactive DDT, 22 survived after 48 hr in a respiration chamber at 30–35°. The respiratory CO<sub>2</sub> collected in this period was found to be nonradioactive. Practi-

<sup>1</sup> Published with the approval of the Monograph Publication Committee, Research Paper No. 219, School of Science, Oregon State College.

cally all the radioactivity in the pulverized roaches was recovered by 80% ethanol extraction. The ethanolic extract after removing the alcohol by distillation was in water and extracted with ether for 36 hr. Radioactive assay of the extracted water phase revealed that as much as 43% of the radioactivity remained in the aqueous phase and cannot be readily removed by continued ether extractions. However, upon refluxing with 20% sulfuric acid for 3 hr, the radioactivity in this fraction was completely extracted by ether in 4 hr. This finding has led the authors to speculate that the water-soluble radioactive principle in this case is probably a conjugated compound composed of a derivative of DDT and another fragment possible carbohydrate in nature.

Similar experiments carried out at lower temperatures further indicated that the formation of this water-soluble conjugated compound was reduced to 7% at 25–30° accompanying a higher mortality of roaches over the same length of time. This could mean that the formation of the "conjugate" is directly related to the detoxification mechanism of DDT in American cockroaches. The nature of this conjugated compound is currently under investigation.

J. S. BUTTS  
 S. C. CHANG  
 B. E. CHRISTENSEN  
 C. H. WANG

Departments of Chemistry, Agricultural Chemistry,  
 and Entomology  
 Oregon State College, Corvallis

### References

1. VINSON, E. B., and KEARNS, C. W. *J. Econ. Entomol.*, **45**, (3), 484 (1952).
2. SCHECHTER, M. S., *et al. Ind. Eng. Chem., Anal. Ed.*, **17**, 704 (1945).
3. BUHLER, D. R., WANG, C. H., and CHRISTENSEN, B. E. To be published.

## Academic Origins of AAAS Presidents and Recipients of AAAS Awards

SEVERAL surveys have been made recently on the academic origins of outstanding leaders of American science. Sixty-seven members of the National Academy of Sciences received their undergraduate training in liberal arts colleges (1). One in five of the presidents of the American Chemical Society since 1900 received his training in a liberal arts college, and the same ratio holds for the recipients of ACS administered awards (2).

The most interesting conclusion from the present study of leaders of the AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE is that the same ratio of one in five of the Association's presidents since 1900 has had a liberal arts background. The eight liberal arts institutions training AAAS presidents are: Augustana, Beloit, College of Wooster (2), Denison, Hanover, Oberlin, Ohio Wesleyan, and Wesleyan (2).

Only 10% of the recipients of two of the Association's major awards are graduates of liberal arts col-