Brooks, Dunn; Hopkins: Sonneborn; Illinois: Ackert; Iowa State College: Irwin; Michigan: Okkelberg; Pennsylvania: McIndoo; Princeton: Butler; Stanford: Irving; Washington (St. Louis): Schmidt, F. O.; Berlin: Mayr; Freiberg: Hamburger; Geneva: Schotte; Paris: Ephrussi; Tokyo: Kudo. (No Ph.D., 4.)

Collegiate:

Cornell: Adelmann, Gordon, Schmidt; Amherst: Young; Bates: Pollister; Bowdoin: Irving; Chicago: Park; Columbia: Tyler; Emory: Kirby; Fairmount: Beams; Haverford: Dunn; Hopkins: Sonneborn; Illinois: Ackert; Indiana: Kennedy, McIndoo; Iowa State College: Irwin; Massachusetts College: Brooks; Michigan: Barth; Minnesota: Okkelberg; Missouri: Hibbard; Ohio (Athens): Buchanan; Ohio Wesleyan: Turner; Nebraska: Beadle; New York City College: Friedmann; Park: Light; Stanford: Dice, Ferris; Syracuse: Butler; Washington (St. Louis): Schmidt, F. O.; Wisconsin: Boyden; Germany: Hamburg, Mayr; other foreign 3; no college reported 2.

Birthplaces:

New England 2, New York 4, Pennsylvania 2, New Jersey 1, Illinois 4, Indiana 2, Iowa 1, Kansas 3, Michigan 1, Minnesota 1, Missouri 1, Nebraska 1, Ohio 2, Wisconsin 1, Maryland 1, Virginia 1, Georgia 1, Canada 1, Russia 3, Germany 2, Japan 2.

ZOOLOGISTS STARRED 1932–1944

Distribution:

Columbia 7, Stanford 6, California 5, Michigan 5, Chicago 4, Harvard 4, Rochester 4, Cornell 3, Northwestern 3, Princeton 3, California Institute of Technology 2, Illinois 2, Indiana 2, Minnesota 2, New York University 2, Oberlin 2, Ohio 2, Yale 2. With 1 each (in addition to those having a man starred in 1943): Clark, Connecticut College, Holyoke, Missouri, Sarah Lawrence, St. Louis, Trinity, Tulane, Western Reserve. Also American Museum of Natural History 3, Carnegie 1, U. S. National Museum 2.

Doctorate:

Harvard 16 (10 in 1932), Columbia 12, Cornell 12, Chicago 9, Illinois 7, California 5, Wisconsin 5, Yale 5, Bryn Mawr 2, Hopkins 3, Michigan 3, Princeton 2, Stanford 2.

Collegiate:

Cornell 8, Stanford 5, Amherst 4, New York City College 4, Chicago 3, Columbia 3, Indiana 3, Missouri 3, Bowdoin 2, Dartmouth 2, George Washington 2, Harvard 2, Illinois 2, Michigan 2, Minnesota 2, Rutgers 2, Syracuse 2; 1 each from about 30 others.

Birthplaces of all starred zoologists:

New England 73, Middle Atlantic States 99, East North Central States 82, West North Central States 47, South Atlantic 22, South Central 6, Mountain States 3, Pacific States 3, Canada 8, Germany 11, Russia 7, Britain 5; other Europe 8.

STEPHEN S. VISHER

INDIANA UNIVERSITY

ERGOSTEROL FROM SOME SPECIES OF PENICILLIUM

IN a recent communication Zook, Oakwood and Whitmore[1] reported the presence of approximately 1 per cent. of ergosterol in the dry mycelium of *Penicillium notatum.*

Data have been collected in our laboratory over a period of time on the ergosterol content of *P. notatum, P. chrysogenum* and *P. citrinum* as cultivated under various conditions. We have found that ergosterol is present only in surface culture material. The ergosterol was determined by spectrographic quantitative analysis and in several instances confirmed by isolation of the sterol, determination of its physical properties and preparation of derivatives.

A *P. notatum* surface culture strain, obtained from penicillin production batches, yielded ergosterol: by direct extraction and isolation, 1.06 to 1.09 per cent. of the dry mold; by spectrographic analysis, 1.10 per cent. The mold in this case had been cultivated on a lactose medium. Cultivation on a starch medium yielded a mycelium containing 1.05 per cent. ergosterol by spectrographic analysis.

A *P. notatum* submerged culture strain, obtained from production batches, yielded no ergosterol by direct extraction, and only traces were indicated spectrographically.

A strain of *P. chrysogenum,* grown as a surface culture, showed 1.0 to 1.1 per cent. of ergosterol.

P. citrinum, the mold which produces citrinin, contained 1.1 to 1.3 per cent. ergosterol as determined by direct isolation.

It will be observed that several species of Penicillium show consistently about 1.1 per cent. ergosterol in the dry mold when cultivated as a surface culture. Submerged fermentation appears to be unfavorable for ergosterol production.

C. J. CAVALLITO

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RENSSELAER, N. Y.

SOLUTION OF THE CUBIC EQUATION

IN view of the many valuable features of the recent "Webster's Biographical Dictionary" (1943) and its wide usefulness in the schools it may be desirable to note here that it fails to give due credit to H. Cardan in regard to the progress in the solution of the general cubic equation as developed in his noted "Ars Magna" (1545). Under the name of Tartaglia in the present work it is said that he is credited with the discovery of the solution of the cubic equation, later published by G. Cardano as his own; and under the name of Cardano it is asserted that he gave as his own the cubic solution which he had obtained from Tartaglia, the discoverer.

[1] Zook, Oakwood and Whitmore, SCIENCE, 99: 427, 1944.