

average with Newman Hall rating highest among the independent houses.

Engineers Celebrate

Reigning over a week of celebration by campus engineers this spring were Earl Patterson as St. Pat, and Queen Elizabeth Cook, both of Oklahoma City.

Main events of the week were a ball, a banquet and an engineers' show at a Norman theater. A departure from tradition came when the queen's attendants, not the queen herself, were kidnapped and failed to show up for the coronation. The attendants, Beth Feagles, Oklahoma City, and Jean Wheeler, Fort Smith, Arkansas, were abducted by pre-med students instead of the lawyers, whose ranks are war-depleted.

Mr. Patterson is president of four campus organizations, the Senior Class, Tau Beta Pi engineering fraternity, the Engineers Club and St. Pat's Council. He is also a member of Sigma Tau engineering fraternity, Delta Chi fraternity, Alpha Chi Sigma honorary chemistry fraternity, and the American Institute of Chemical Engineers. During engineers' week he was elected to an associate membership in Sigma Xi national scientific research society.

Senior Weekend

The June graduating class celebrated with a series of festive affairs the last weekend in May.

Highlighting Senior Weekend activities were a preview party, a late breakfast in the Union Cafeteria, a faculty coffee, a bowery party, a senior banquet and an all-University dance in honor of the class.

Class activities were under the direction of Earl Patterson, Oklahoma City, president, and Betty Abbott, Durant, chairman of the Senior Weekend committee.

Y. M. C. A. Secretary Resigns

Clifford H. Murphy, secretary of the University Young Men's Christian Association and University employment secretary, resigned effective May 25. No successor to Mr. Murphy has been appointed, Dean E. N. Comfort, president of the Y. M. C. A. board, said.

Mr. Murphy joined the University staff in 1941. He holds a B. A. degree from MacMaster University, Hamilton, Ontario, and an M. A. degree from the University of Chicago.

Mather Writings at O. U.

A 77-volume collection of the Massachusetts Historical Society has been purchased by the University for the use of the department of history.

The collection, which is to be used principally by history students in thesis research, includes the Belcher and Aspinwall papers and the manuscripts of the well known minister, Cotton Mather.

Science at Work

THE TOAD may well be called the farmer's stepchild. Yet a toad is worth about \$25 a year to a Southwestern grasslands farmer through the large amount of injurious insects eaten. And conservative estimates reveal that toad populations of over 400 of one species alone per acre inhabit certain areas.

People are prone to value songbirds as paragons in their worm-munching ability and to visualize toads as small, repulsive animals of little harm but no great good. While it is true no toad is going to fly up into a tree and pick off a caterpillar, there is an entire fauna of night creatures which he cleans up on as friend bird peacefully sleeps.

These conclusions are the results of research done by Dr. Arthur N. Bragg, assistant professor of zoology at O. U. Dr. Bragg has studied toads for nine years and shows no signs of weakening. He received his master's degree at Boston University in 1934 and his Ph. D. at O. U. in 1937. He has many publications to his credit in the field of biology. Through his work, Dr. Bragg has proved that toads constitute an important asset to farmers and gardeners, especially in the Southwest.

The value of an animal such as the toad may be based on three considerations: resistance to enemies and adverse physical conditions, successful reproduction of young, and beneficial amount of harmful plants or animals destroyed.

Toads have few natural enemies as adults. In the tadpole stage, they are eaten by some large insects and fishes. When grown, the toads are usually immune from attack by larger animals because of a secretion of the skin which is obnoxious to most animals.

They are protected from the excessive dryness and heat found in the Southwest by two habits. They breed and feed mostly at night and in daytime they rest well below the surface of the ground where it is moist and cool.

Toads show their greatest adaptability in their reproductive habits. A species

such as the Great Plains toad, a Southwestern dweller which lives where there is an uncertain amount of moisture, has to be particular as to the breeding location. If there are flooded fields on a farm where the water is 6 or 7 inches in depth and the whole pool rather extensive, there will be a good crop of toads the next year.

On the other hand, the Rocky Mountain toad, which needs the least moisture of any Oklahoma species, will breed at any time during the warm months, anywhere. They utilize deep ditches, mucky tanks, and slough such as those along the rivers. If necessary, they will breed in flowing streams or even fish ponds.

Dr. Bragg has observed the diet of toads by watching them feed, offering them delicacies and noting those they prefer. He has also dissected captured toads and identified the material in their stomachs.

Rationing does not bother them, as they feast on insects, spiders and such creatures for the most part. No evidence has been found of toads eating vertebrate animals in which respect they are different from frogs, which are often cannibalistic.

The same limitations that prevent the toad from having the glamor of the songbird also prevent him from dining on butterflies and the economically important bees. Beetles, ants, crickets and grasshoppers are exterminated by the thousands, however. Junebugs, which attack the roots of grasses and grains, are one pest often effectively liquidated by toads.

Dr. A. H. Kirkland of Harvard University some 40 years ago estimated that each toad was worth more than \$18 per year to the Eastern farmer. He drew this conclusion from his belief that a toad fills his stomach four times a day, and the large amount of pre-harvest harvesters eaten by toads. It is Dr. Bragg's opinion that the Southwestern toad fills its stomach only once or twice a day.

Chinch bugs tend to be the biggest menace in this section of the country. Great Plains toads, who delight in chinch bugs, are also most numerous in the wide open spaces. This is a fortunate coincidence for the farmer.

The other scourge of the Southwest is the cutworm or larvae of certain moths. These emerge from the ground at night to feed upon the vegetation. They come out in the spring when the plants are young and frail and hence are able to destroy completely much of the crop. The appetite of the toad is also stirred in the spring, since he has been sleeping all winter and needs nourishment badly. Since insects are not yet abundant, he picks on the cutworms, and wholesale massacres take place.

—ELIZABETH LEES

Graduation Set for June 26

Dr. Eugene S. Briggs, president of Phillips University at Enid, will speak at the Class of '44 commencement exercises to be held at 8:00 p. m., Monday, June 26 in the Outdoor Auditorium on the campus.

Baccalaureate services will be held on the evening of June 25. Rev. C. A. Denney, pastor of the First Christian Church in Norman, will deliver the address. Melvin Alpern, graduating senior from Oklahoma City, is chairman of the student committee in charge of commencement arrangements.
