tities of the poison by methylene blue. Since it seems probable that a not inconsiderable fraction of administered cyanide is also bound by tissue methemoglobin and since the animals, in spite of administration of large quantities of the dye, show a considerable degree of cyanide poisoning, it appears probable that the binding of cyanide by methemoglobin accounts for the greater part of the dye's action.

Details of the writer's experiments will be published elsewhere.

WILLIAM BEAN WENDEL

COLLEGE OF MEDICINE,
UNIVERSITY OF TENNESSEE

TWO RATTLESNAKES KILLED BY A COTTONMOUTH

AT least three recent papers[1] have commented upon the susceptibility of certain North American Crotalid snakes to the venoms of their own or related species. In these it is shown that the widely circulated statement that poisonous snakes are immune to their own and each other's venoms is not infallibly true; cases are cited in which specimens bitten or injected with venom died with marked symptoms of snake bite poisoning. Two additional fatal cases have recently been noted in the collection of the Toledo Zoological Park.

Two Pacific rattlesnakes, *Crotalus confluentus oreganus* (Holbrook), were placed temporarily in a cage containing several cottonmouth moccasins, *Agkistrodon piscivorus* (Lacépède). At 8:00 A. M. on June 7, 1934, one of the moccasins was found grasping a rattler in its jaws and with its fangs apparently imbedded two or three inches anterior to the base of the tail. When the snakes were separated the rattlesnake crawled slowly away, dragging its tail as if the latter were paralyzed. When viewed from a little distance neither swelling nor fang marks were evident. Three hours later the area which had been held by the moccasin was considerably swollen and gradually increased in size until the snake died at 1:15 P. M. An autopsy showed a marked edema, extending three or four inches forward from the anus. The muscular tissue was soft and purplish red and the skin was beginning to slough away from the body. The left kidney was swollen and deep purple in color. The rattlesnake measured twenty-six inches in length; the moccasin about thirty.

Four days later the same moccasin was discovered swallowing the second rattlesnake head first. When the cottonmouth had been forced to disgorge, the victim showed marked distress and moved with considerable difficulty. Two hours later it seemed dead, but feeble movements were noted until a short time before the snake died about nine and a quarter hours after the first observation. Its head and about four inches of the neck were swollen enormously and resembled a snake in the act of swallowing a sizable object. There was a marked edema and a deep purplish coloration in this area, the tissue surrounding the right fang being most intensely affected. This rattlesnake measured twenty-nine and five-eighths inches in length.

While the actual bites were not observed in either case, the symptoms, typical of snake poisoning, indicated that each rattlesnake received an appreciable amount of venom. The same moccasin also killed and ate a smaller snake of its own species, but the incident was not noted in time to permit detailed observations.

ROGER CONANT

TOLEDO ZOOLOGICAL SOCIETY
TOLEDO, OHIO

[1] Gloyd, SCIENCE, 78: 2010; Wooster, SCIENCE, 78: 2030, and Nichol, Douglas and Peck, *Copeia* 4, 1933.

DIARIES OF EARLIER GENERATIONS IN THE STUDY OF SLEEP

MANY clinicians and other competent observers have called attention to the changed pace of life which they believe may be a factor in causing that vague condition peculiar to civilization and which is sometimes called "Americanitis." Whether or not a wide-spread curtailment of the amount of sleep exists may throw light on one of the possible causes, both direct and indirect, of this observed condition. We are trying, from a study of diaries, to discover if the hours of sleep to-day are in fact significantly shorter than those of our fathers and grandfathers.

The diaries which are available to the workers in the laboratory are, unfortunately, not numerous. Hence an appeal to the readers of SCIENCE to scan any diaries from twenty-five to seventy-five years old which may be in their possession in order that we may have an adequate sample of records for study.

The data which a diary reveals, and which we should appreciate having forwarded to us, are: (1) Hour of retiring, (2) hour of rising, (3) the date of the original entries, (4) residence at the time of the entries, and (5) age of the diarist at the time of the entries.

We have secured several diaries which record these data intermittently over a life span; in such instances we are abstracting a sample of hours of retiring and of rising in the early twenties, in the early forties and again in the early sixties of the individual's life. We should esteem the cooperation of any readers who would abstract such data from diaries they have, including the sex and name of the diarist with the other data.

DONALD A. LAIRD

HAMILTON, N. Y.