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Frank Nelson Blanchard, Scholar and Teacher*

BY

HOWARD K. GLOYD

There lived among us once a quiet man who sought but little of the world's acclaim. For those of us who became his friends the mantle of diffidence was drawn aside and we became aware of the power of his intellect and the warmth of his personality. We sought his counsel and received honest and considered opinion. We marveled at his industry, his incisive thinking, his sympathetic grasp of our problems, and his vision beyond horizons of the present. We acknowledged him as a master of his field and sat eagerly at his feet. That man was Frank N. Blanchard. In his death herpetology has lost one of its foremost scholars and younger workers their brightest guiding star.

Frank Nelson Blanchard was of New England ancestry. He was born at Stoneham, Massachusetts, December 19, 1888, the son of Charles Frederick and Florence Amelia (White) Blanchard, who shortly moved to nearby Somerville where Frank spent his boyhood and youth.† The family in America traces back to Thomas Blanchard of Braintree and Charlestown who came from England in 1639. His grandfather Isaac

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† For information relating to Dr. Blanchard's boyhood and youth the writer is indebted to Frieda Cobb Blanchard and to a memoir prepared by a committee from the University of Michigan Faculty (Bartlett, *et al.*, in appended list of biographical sketches).

Gray Blanchard, printer, publisher, and editor, was an early advocate of labor reforms and wrote prolifically for the newspapers, both prose and verse. Two of his sons also followed the printer's trade. One of them, Charles Frederick Blanchard, Frank's father, founded—and for many years printed, edited and largely wrote—a local newspaper “The Somerville Reporter.”

Because of his father's semi-invalidism for several years preceding his death, it early became necessary for Frank to turn his hand to helping maintain the family. He went through the usual boy's experience of delivering newspapers and then became caretaker at the Unitarian Church in Somerville. By diligent attention to this work, and to irregular rush-time employment with the Massachusetts Highway Commission, he was able to finance his music lessons and to contribute to his expenses in high school and college. He played the piano and for years was a member of an active music club that met biweekly. In later years music was all but crowded out of a too busy life.

With no inclination for the ancestral vocation of printing and newspaper work, he showed very early a great interest in science. As a grade-school boy he investigated electrical devices and played with batteries, his interest in electricity persisting through his college years. In high school his chief passion was for chemistry. He fitted up his own laboratory in the home cellar and busied himself in it for several years. It was not until he went to Tufts College that he turned to natural history. His first idea was to become a forester and his undergraduate work was carried out with the idea of entering the Graduate School of Applied Science at Harvard; but under the influence of Professor F. D. Lambert he developed an interest in botany and made substantial progress in that direction. During his last year at Tufts he held a teaching assistantship in botany. He was graduated in 1913 and the following year published his first, and last, botanical paper.

The death of his father shortly before Frank graduated made him give up hopes of immediate graduate work, and a chance offered during the summer of 1913 to teach zoology and geology at Massachusetts Agricultural College, Amherst, finally made him a zoologist rather than a forester or botanist. At Tufts he had been a devoted student of Professor J. S. Kingsley, and had become quite as proficient in zoology as in botany. Three years of teaching and the development of courses at Amherst gave Blanchard his first opportunity for field work in a favorable region. It was during this period that he matured as a zoologist. His



Frank N. Blanchard

diary—started in 1905 and kept for thirty-three years without missing a day—is filled with notes of outdoor observation that reveal his enthusiasm.

In 1916 he was appointed to a fellowship in zoology at the University of Michigan and entered the summer session at the Biological Station at Douglas Lake. At this time he had not specifically decided upon a subject for a doctoral dissertation but his interest had become more or less focussed upon vertebrates. After a year at Michigan, and influenced to some extent by Professor Ruthven's course in zoogeography, he decided upon the field of herpetology. In 1919 he received the degree of Doctor of Philosophy, submitting as a dissertation his revision of the king snakes.

As an aid in the division of reptiles of the U. S. National Museum during 1918 and 1919, he had the good fortune of association with Dr. Stejneger, then as now, the Nestor of American herpetologists. Conditions resulting from this country's entry into the World War brought about his return to the University of Michigan in 1919. Having been refused as physically unfit for military service, for he was entirely dependent upon his glasses, he was available for appointment to a vacant instructorship. He accepted somewhat reluctantly for he had become devoted to the National Museum and to Dr. Stejneger personally and did not care to be uprooted. Michigan has had no occasion to regret the decision to call him back from Washington, however, for his outstanding work was a great factor in making that university one of the leading centers of herpetological research.

At Ann Arbor on June 12, 1922, Dr. Blanchard married Dr. Frieda Cobb, a daughter of the late Nathan A. Cobb, eminent nematologist of the U. S. Department of Agriculture. He was advanced in rank to assistant professor in 1926, and to associate professor in 1934. He became a member of the faculty of the Biological Station in 1922 and during his fifteen summers there he taught courses in ornithology, directed the work of graduate students in ornithology, assembled most valuable records on the birds of the Douglas Lake region, and carried on research on the habits and life histories of snakes.

The Blanchards spent a sabbatical year (1927-1928) in New Zealand, Australia, and Tasmania where they had opportunities for studying the nearly extinct tuatara (*Sphenodon*) and improving their general knowledge of world zoogeography and phytogeography. Their visit to Stephen Island, one of the last strongholds of the tuatara, resulted in publicity of

advantage to this vanishing reptile, for it is now more adequately protected against the extermination that had seemed surely in store for it. On this trip Dr. Blanchard rediscovered the "lost frog of Tasmania," *Crinia tasmaniensis*, described fifty years previously but until that time known only from the cotypes in the British Museum.

Dr. Blanchard's achievements in natural science were formally recognized by several honorary societies. As an undergraduate he was made a member of Phi Beta Kappa and later of the Society of Sigma Xi. He belonged to Gamma Alpha, Phi Sigma, the University of Michigan Research Club, and numerous professional organizations. Among the more signal honors he received during his lifetime was election to corresponding membership in the Zoological Society of London, and one of the last things that he understood just before his death was the reading of a letter from Dr. J. McKeen Cattell informing him that his name had received the coveted "star" for the forthcoming (sixth) edition of *American Men of Science*, indicating his inclusion among the thousand outstanding leaders in American science.

In July, 1937, while teaching at the Biological Station at Douglas Lake, Dr. Blanchard was seized with a fever the cause of which was not immediately diagnosed. He was brought to the University Hospital at Ann Arbor where after a gallant struggle he succumbed to bacterial endocarditis on September 21.

My first contact with Dr. Blanchard took place a little more than seventeen years ago when, as an undergraduate struggling to put names on some preserved snakes, I discovered by accident his king snake paper and wrote him for assistance. His reply was cordial and helpful and he sent me a small preserved specimen for comparison with my material. This first letter included a request for the loan of specimens of ring-neck snakes, a group which occupied much of his attention during the last several years. Association with him as his student during two summers at the Biological Station, a three weeks collecting trip in 1926 to southern Louisiana with Percy Viosca, Jr., several years at the University in Ann Arbor, and a five months tour of the Southwest and West Coast in 1935-6, strengthened the bonds of our chief mutual interests.

Becoming acquainted with Dr. Blanchard was not easy. By nature he was shy and diffident and beneath his imperturbable exterior his true thoughts and feelings were difficult to discern. Meeting strangers often seemed an ordeal. Without the assurance of a common interest he was reluctant to take the initiative and conversation was difficult. He cared

nothing, apparently, for making an impression and often failed to put the best foot forward. Although always polite he commonly made no effort to be agreeable. Many who had known him through correspondence were surprised by his constraint at the time of their first meeting. With some this constraint rapidly disappeared but with others it persisted. It is certain that he had no wish to be discourteous but lack of something more or less tangible in common with a new acquaintance made it very hard for him to put aside his shyness. In one instance during our western trip the day was saved by the chance discovery that the man we were visiting was also a subscriber to *Consumer's Research*. A strapping handsome cattle rancher in Arizona was accepted with reservations until it was revealed that he too was a devotee of *Reader's Digest*.

Dr. Blanchard's modesty was almost extreme. He never talked about himself except when necessary. From his vast experience as a field collector he could have held his companions entranced with accounts of his interesting finds and how he found them, but seldom could he be persuaded to tell the story of a trip. Only rarely would he express an opinion about something of which he had no specific knowledge. The scientific method of assembling all available data before making a conclusion was applied not only to his researches but to relatively minor daily activities.

He read widely and effectively on substantial subjects and kept himself well-informed on political and economic affairs and on such other matters as held some claim to his attention. In sports, the cinema (except for an occasional outstanding film), and in other popular diversions he had no interest; names like Mickey Cochran, Bobby Jones, Jean Harlow and Paul Whiteman to him had no significance. His deep appreciation of good music was very real and he enjoyed some of the lighter operettas such as those of Gilbert and Sullivan. On occasion, in the midst of his family and closer friends, he delighted in reading aloud selections from W. S. Gilbert's *Bab Ballads*. He was especially fond of "The Yarn of the Nancy Bell."

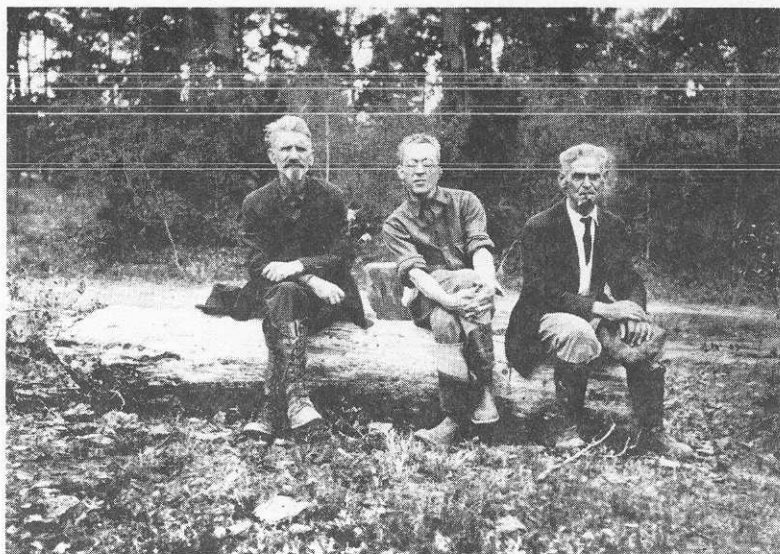
Although he seldom more than smiled when someone told an amusing story, he had a sense of humor of his own subtle variety and his rare ventures into witticism were clever but sometimes double-edged. A sensitive person might wonder whether the stings they occasionally carried were accidental or intentional.

He had no petty vices and apparently no hobbies or pastimes in the usual sense. Photography, for example, in which he had much skill,

though started merely for personal pleasure was later chiefly a means to an end. Mrs. Blanchard once told me that he always had a vague longing for some kind of play, but never took time to develop it; on board boat (on the Australian trip) he entered into deck sports wholeheartedly, but with means of research at hand, and more ideas than he could possibly carry out, he put off the fulfillment of the need for play. He was so conscientious about his less interesting duties, and so absorbed and eager in his research, that he probably gave little thought to an avocation. He seemed to have defined for himself very sharply his sphere of mental and physical activity and rarely overstepped this boundary. His amazing capacity to shut out completely all trivialities and non-essentials, occupying himself with his work and his immediate personal relationships, explains perhaps the effectiveness and far-reaching importance of his achievements.

Although Dr. Blanchard's scientific interests as reflected in his earlier papers were at first varied, his chief contributions dealt with the taxonomy, distribution, and life histories of North American snakes and salamanders. In the organization of his research he had field problems and laboratory studies in progress simultaneously. His love of the out-of-doors was so great that he could not waste good opportunities for field work by counting scales and measuring specimens in the laboratory. Although he did not discount the importance of expeditions to remote places, he was keenly appreciative of the opportunities for useful observations close at hand. So many problems for investigation in connection with common species were so obvious to him that he was impatient with others who could not see them. His contribution to a symposium on "Opportunity for Investigation in Natural History by High School Teachers" is fairly bristling with questions suggesting problems that could be solved by careful observations on familiar animals.

Dr. Blanchard's work on the life histories of snakes and salamanders has resulted in many outstanding contributions. He was the first person to determine accurately the hyetal stimulus responsible for the breeding migration of the spotted salamander, and his series of papers on the four-toed salamander reflects his acute powers of observation and his unremitting patience in collecting notes over a period of years. His studies of the egg-laying, hatching, and young of the smooth green snake and the eastern ring-neck snake present many important facts in the life cycles of these species and are worthy of emulation by those who have similar interests. More important than all this, however, his work has lifted



Dr. H. P. Löding, Dr. Blanchard, and T. S. Van Aller
near Mobile, Alabama, April, 1926.



Dr. Blanchard (right) and H. K. Gloyd camped in Limpia Canyon,
Davis Mountains, Texas, October, 1935.

natural history from the old plane of haphazard recording of casual observations, which indeed merits the opprobrium often heaped upon it by experimentalists, into a new level of true science worthy of the best efforts of trained zoologists.

As a taxonomist Dr. Blanchard was conservative. He had no patience with "species hunters" and proposed new names himself almost reluctantly. When describing a new species or subspecies he did so from necessity and not to add to his own renown. He assumed the obligation of determining as completely as possible the true status of the population in question, never taking the easy way of naming it hastily and leaving it for someone else to puzzle over. The practice of bestowing patronymic names to curry favors from individuals so doubtfully honored called forth his scorn. Although constantly reticent he was not really secretive but talked freely of his problems when doing so would be helpful to someone else. He frequently turned over quantities of his own data to his students and colleagues when such action would expedite work which he thought he would not be able to pursue with promptitude.

The *Revision of the King Snakes*, Dr. Blanchard's first major paper, followed the genetic approach developed by his teacher Professor Ruthven but contained many original innovations and furnished the most complete analysis of intrageneric relationships that has ever appeared in American herpetological literature. One of his most outstanding papers, *A Key to the Snakes of the United States, Canada and Lower California*, has probably been more widely used than any other work of reference in our field. Many years of critical work found modest expression in this little volume, and serious students, both professional and amateur, were quick to appreciate its value and to recognize Dr. Blanchard's preeminent leadership in the study of the snakes of North America.

In addition to the more outstanding contributions, Dr. Blanchard developed a practical system for marking living snakes so that the movements, behavior and growth of individuals could be studied, and initiated a series of observations on seasonal activities of snakes which, had he lived, would have given us better understanding of their yearly movements, hibernation, individual ranges and other habits. His shorter papers contributed to our knowledge of secondary sex characters, sex ratios, age groups, food, courtship, and breeding habits.

In collaboration with Dr. Frieda Cobb Blanchard, he began in 1922 a series of genetic experiments on garter snakes which have been carried on continuously to the present time and are being brought to completion

and reported upon by Mrs. Blanchard. These studies are remarkable not only because such experiments on snakes are very few but also in that these observations on individuals, kept under practically natural conditions for almost their complete life span, have added greatly to the knowledge of breeding habits and general bionomics as well as the inheritance of color characters.

At the time of his death two taxonomic contributions of importance were practically completed: one, on the forms of *Tantilla* north of Mexico, has been published; the other, his monograph of the ring-neck snakes (genus *Diadophis*), on which he had been at work for nearly fourteen years, is being made ready for the printer.

Dr. Blanchard wrote with great care and precision although admitting that it was not easy. He set for himself, and maintained, an extraordinarily high standard in writing. When criticising a paper for one of his students he once said: "You can't afford to have a sloppy sentence in any of your papers. Once something is in print you have it staring you in the face for all time. Make each paper, if you can, just a little gem!"

Many of these studies of Dr. Blanchard's should have found their culmination in one or the other of two major projects, a semi-popular handbook of the snakes of North America and a treatise on speciation in snakes. In the early fall of 1933 he generously invited me to join him as junior author of the handbook. This combination, it was thought, would be advantageous because of our necessarily similar viewpoints on some of the more essential considerations and the differences in our field experiences. Dr. Blanchard's work had been largely concerned with eastern groups and mine with western. In the course of our tour of the Southwest and West Coast in 1935 and 1936, we fortunately had opportunities for discussing and organizing this undertaking and I shall endeavor to bring it to completion as nearly as possible in accord with the original plan. Beyond a few exciting preliminary notes which he once showed me, very little of the essay on speciation was set down on paper. In reply to my enthusiastic exclamation he remarked to the effect that it would be many years before these tentative precepts could be set in type, for much was yet to be learned about each and every one. One of my deepest regrets is that his thoughtful interpretations of such interesting phenomena will never reach the printed page.

As a teacher Dr. Blanchard preferred to encourage students to discover new facts rather than to reiterate old facts for continuous genera-

tions of new students. He was intolerant of the kind of semi-stupid student who has to be cajoled into learning. This combined with his shyness and modesty placed him at a disadvantage in teaching an elementary course. He was ill at ease on the lecture platform and his soft voice was sometimes difficult to understand. His courses in ornithology at the Biological Station and his natural history of vertebrates at Ann Arbor, however, were unequivocally successful.

The vertebrate course developed by Dr. Blanchard at Michigan became probably the best of its kind.* It included the classification, distribution, and habits of the vertebrate classes (except birds) with a worldwide scope. Local species, of course, were studied both in the laboratory and in the field, but in general there was little provincialism in the treatment of the mammals, amphibians, and reptiles. The okapi, the Surinam toad, and the matamata received attention as well as the fox, the wood frog, and the snapping turtle. Dr. Blanchard spared no pains to keep the subject matter up-to-date, progressive, and dynamic. Each year he spent much time in improving and augmenting the illustrative material and devising means of increasing its effectiveness. He taught the students in this class to use a fairly extensive literature, encouraged them to consult all the best technical papers when writing up the life history of some local species. He gave them training in statistical methods and taxonomical procedure, with practice problems, and required each one to do some little job of original investigation and write a report of it. On field trips he drilled them on such things as tracks and gaits of mammals; he taught them how to study other activities and habits, how to make field notes, and how to use them. One of his former students recently wrote:

" . . . I can never forget a gray-haired figure in loose khaki, issuing instructions from a muskrat-house rostrum or slouched against a tree, camera in hand, ready for a candid shot of his students at work. In such an environment he was at home, his shyness gone, his sly wit unleashed, and his enthusiasm simmering until a discovery caused it to boil over. One of his games after a morning of meandering study was to command us to point in the direction of our cars, parked a few miles away. Arms promptly boxed the compass and we learned that if a direction-sense exists in man than we were sadly deficient. . . . We were taught to recognize the inadequacy of the human memory and to write

*For pertinent comments on the organization, operation, and effectiveness of the vertebrate course, the writer is grateful to William H. Stickel who was one of Dr. Blanchard's assistants.

our notes at the moment of observation. Of every hour in the field I am certain that we spent one-quarter in notetaking.

"Disappointments on his field trips were few; and the apology: 'That's strange! The animals were here last week!,' oft-heard in other classes elsewhere, was unknown. If Blanchard promised us a view of courting salamanders on a dark, rainy evening in White's Woods the salamanders fulfilled his promise. This was not magic but a compound of long observation and painstaking checking prior to each class.'"

Perhaps above all was he successful in stimulating and encouraging his graduate students.

"Next to wading in a swamp or tramping the woods, Blanchard was most completely at ease leaning back in his office chair with a small group of graduate students gathered in the room. Here his students did most of the talking while his keen mind examined every statement. He pounced upon imprecise data, asked pertinent questions, and kept attention focused on the subject under discussion . . . [His] best seminars dealt with contemporary publications and with zoogeography. Although rarely, if ever, personally guilty of publishing in haste and repenting at leisure, he could make allowances for other workers who lacked his ability to marshal facts until they pointed to irrefutable conclusions. Static faunal lists and padding he abhorred. Himself a voluminous writer of field notes, he insisted that such notes should be summarized for the reader and not published in their entirety.'"

With his advanced students he perhaps exerted his strongest influence in the role of critic. He discouraged their haste in publishing youthful, underdone productions, making clear without preachment that in scientific work truly anything worth doing at all is worth doing well. Seldom would he comment at length on a manuscript in the absence of its author, but if one brought such a paper to him so that it could be discussed in person, he was lavish with his time and effort. His criticism was completely honest, even if it hurt, and he was sparing in his praise. After silently reading a few pages which I submitted to him on one occasion he fixed me with a look that plainly said, "This is disappointing; in fact, plainly stinko," but such a word could not have been in his vocabulary! He reached for a sheet of paper and wrote for a few minutes; then with a touch of mock-pomposity he cleared his throat and said, "Now, you listen to me!" The words that followed were my own but he had

* Netting, *Bios*, vol. 10, 1939, p. 133, 134.

rearranged my choppy sentences and garbled logic into smooth phrases and orderly argument!

For doctoral candidates he upheld an ideal, an ideal even beyond the excellence of the example set by his own work, an ideal impossible to achieve, perhaps, but which was definitely stimulating. He was not satisfied with a thesis which indicated only that the candidate was potentially able to do research. He believed that doctorate theses should be substantial contributions to knowledge, rounded out with care, logically completed, written in a scholarly manner and in form suitable for publication when submitted to the committee. He deplored the current "fashion" in advanced degrees and their increasing meaninglessness in many cases. Just before his last illness, during a discussion with some of his students, he wrote the following:

"For whom is the Ph. D.? The scholar, the research man; the person with a natural 'bent' or tendency for investigation; the one who finds his research the most fascinating thing he ever did.

"Who is the wrong person? The one who just wants to be called 'doctor'; the one who does not enjoy his research, or thinks his problem too hard; the one who does no research unless spurred by research grants, dependent salary increases or promotions."

Dr. Blanchard had a large and active correspondence, not only with his colleagues but with a host of amateurs throughout the country. Many of the latter were collecting and studying reptiles and amphibians with inadequate facilities and sometimes with little sympathy from their associates. In Dr. Blanchard they found a kindly preceptor and friend and from him they never failed to receive assistance and encouragement. Through his influence many of them developed a serious interest in natural history and are continuing to enrich our knowledge and collections of material for study.

Dr. Blanchard gave consistent support to professional societies and encouraged his students to join them. He largely avoided office-holding, although he served as one of the life-term governors of the American Society of Ichthyologists and Herpetologists, and as vice-president in 1936-7. He often requested local committees to list low-cost accommodations for the benefit of students who could not afford to stay at the headquarters hotels, and usually arrived at meetings with his car, or sometimes his more capacious field truck, crowded with students. Graham Netting has told me that he frequently purchased banquet tickets and asked that they be given diplomatically and anonymously to designated

students who otherwise would have missed these affairs which he considered necessary to their professional training.

In the passing of this modest man, a great void has been left in the lives of all those who came under his influence. No words adequately can express our sorrow, but in our hearts we shall ever cherish his memory. Our best tribute will be to carry on the tradition of which Dr. Blanchard was a symbol.

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Dr. Blanchard's monographic study of the genus *Diadophis*, practically completed at the time of his death, is being prepared for publication. Studies on the genetics and life histories of garter snakes will be brought to completion by Mrs. Blanchard, and the handbook of the snakes of the United States will be continued by H. K. Gloyd.

Walter L. Necker