circles was in chunks and hard as if sun-dried or slightly baked.

WARREN K. MOOREHEAD.

QUESTIONS REGARDING HABITS AND INSTINCT.

For purpose of extended comparison we wish data as to habits, instincts or intelligence in animals, above all, minor and trifling ones not in the books, useless or detrimental ones, and the particular breed, species or genus showing each. Examples; Purrings licking; washing face; kneading objects with forepaws, humping back, and worrying captured prey (like the cat); baying at moon (or otherwise); urination and defecation habits (eating, covering up, etc.); disposition of fæces and shells in nest; rolling on carrion; cackling (or other disturbance) after laying; eating 'afterbirth' or young; sexual habits; transporting eggs or young; nestsharing; hunting-partnerships, or similar intelligent associations; hereditary transmission of peculiar traits; rearing young of other species with resulting modification of instinct; feigning death; suicide; 'fascination' and any others. Circular of information will be sent and full credit given for data used, or sender's name will be confidential, as preferred. Answer as fully as possible, always stating age, sex, place, date (or season), species, breed, and whether personally observed.

> G. STANLEY HALL. R. R. GURLEY.

CLARK UNIVERSITY,
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NEWLY HATCHED CHICKENS INSTINCTIVELY DRINK.

EDITOR OF SCIENCE: In your issue of March 6, 1896, appears an excellent and accurate note by Wesley Mills, calling attention to an error of statement made by Prof. Morgan in Science (issue of February 14, 1896).

With due deference to 'The Writer of the Note,' who follows Mr. Mills, and who says that Morgan's argument is satisfactory—that "a chick might die of thirst in the presence of water," I desire to say that this is not my understanding of the case. I have been, during the last thirty-five years, a breeder of fowls as an amateur, and I have given the hatching and rearing of chickens close and continued attention.

I have repeatedly placed a shallow water dish before the bars of a coop in which a newly hatched brood had been placed the day previous, taken there directly from the hatching nest, and in which they never had food or water offered. Repeatedly, before these small chickens, not twenty-four hours from the shell, and before they had been offered food, I have filled their shallow water tray, and observed them toddle out to it, peck at it, or at once thrust their bills into it, to drink at once by uplifting their heads, as all adult fowls do, the hen never putting her head out from the bars, or showing these young chicks how to do what they instinctively did. I have made the same experiments repeatedly with food, with the same result, i. e., that chicks instinctively drink and eat without any example being set by the mother hen. HENRY W. ELLIOTT.

LAKEWOOD, OHIO, March 11, 1896.

SCIENTIFIC LITERATURE.

Moderne Völkerkunde, deren Entwicklung und Aufgaben. By Thomas Achelis. 1 vol., 8°, pp. 487. Stuttgart, Ferdinand Encke. 1896. The author of this work is a 'doctor juris' in Bremen, and the writer of several treatises on the development of the modern science of ethnology, properly so called. In the present volume he proposes to define the true aims of that branch of research by an investigation in the first place of its historical development; secondly, of its contents; and thirdly, of its relations to other departments of knowledge.

He expressly states that the words 'Völker-kunde' and 'Ethnologie' mean one and the same science (p. 300), the aim of which is 'to set forth the development of mankind in its different branches and their various stages of culture, and thus obtain, as nearly as possible, a correct picture of a complete and organic whole.' These stages of culture must be regarded as the constituent elements of a continuous mental process or growth, and thus reveal the unfolding of the universal human consciousness.

In this manner, ethnology leads up to philosophy, which thus enters into the category of the inductive sciences, and wins for itself a sub-