glad to forward, in the name of the individual donor, any contribution toward this homage from all the enlightened world to one of the foremost names in "the pedigree of human thought."

GEORGE BRUCE HALSTED.

2407 Guadalupe Street, Austin, Texas.

Nesting of the Road-Runner.

THIS very peculiar long-tailed bird is common here throughout the year. It inhabits mainly the broad arroyos covered with chapparal thickets and scrub-oaks, as here is found its principal food, small snakes and lizards. The breeding season is from the middle of March to the last of July. The number of eggs laid varies in this locality from three to nine, though usually four to seven. The eggs are pure white, covered with a thick chalky coating which is often found partly scratched off.

The nests are built in thick chapparal bushes or scrub oaks, from two to five feet from the ground. They are composed of coarse sticks placed roughly across the supporting branches to the thickness of about two inches and a diameter of ten inches. Over this platform is placed a layer of sage leaves and twigs, forming a shallow, saucer-shaped depression. Then last, but invariably, is placed in the depression a small amount of dry horse-manure broken into small pieces. I do not know the reason of this last addition but it is nevertheless an invariable constituent of the Road-Runner's nest

The nest of the Burrowing Owl presents the same peculiarity, though with an apparent reason. The nest cavity of the Burrowing Owl is always partly filled with green horse-manure. In this case the decaying vegetable matter probably forms heat enough to carry on the incubation. But in regard to the Road-Runner's nest I do not see the necessity of the dry horse-manure.

I would be pleased to hear from any one who is acquainted with the nesting habits of the Road-Runner. JOE GRINNELL.

Pasadena, Cal.

Ad Ignorantiam.

THE calumniators of Professor Wright have been fully met, and an animus for their attack suggested. There are some critics remaining who have used an argument not found in logic,— that "ad ignorantiam,"— with freedom, and, to the users, with telling effect. A few words as to this argument may not be inopportune.

A. can neither recognize the peculiarly shaped pinnacles on the top of a glacier from day to day, nor can he remember the names of the people who are introduced to him at the receptions to which he goes. B. can do both readily, and states his ability to do so. Thereupon C. jumps up and says that it is impossible to B. to speak the truth, as it is notorious that A. can do neither, and A. is an authority on all subjects. A. finds it impossible on Monday to stake out the surface of a slippery sidewalk, and publishes the fact. On Tuesday B. comes along with knit socks over his boots and makes that sidewalk look like a dress-maker's pincushion. When this fact is published, the ubiquitous C. springs up and tells how often the frame of A. subsided in the attempts, and therefore B. never did what he claims to have done.

A whole tribe of A's fail to find Truth at the bottom of the well— all old authorities to the contrary notwithstanding—and thereupon dogmatize to the effect that she is not there or, if there, is a palimpsest edition, introduced by ex-Olympian means. When B. shins down the rope and brings up the damp and coy dame, he is met by shrieks of C., to the effect that he carried her down in his pocket, because all the A's., aided by the strongest microscopes, could not locate her within seven rows of apple trees of the place.

It may strike people as rather funny for men who have said that certain things do not exist, to prove that they do not exist by failing to find them. It is not their business to find them, or, rather, it would seriously hurt their business to find them. They cannot adduce their ignorance or inability against the knowledge and power of others who have done what they have failed to do, and what they wished to fail to do.

The writer does not think many of the questions as fully settled as they might be; but he does not propose to believe a man because he poses as an ignoramus.

EDWARD H. WILLIAMS, JR.

Bethlehem, Penn., April 14.

Color in Flowers.

IN reply to the inquiry on p. 179 will say that the preservation of colors in flower is fully explained in Professor Bailey's "Horticultural Rule Book." F. H. PLUMB.

Springfield, Mass., April 20.

BOOK-REVIEWS.

Idle Days in Patagonia. By W. H. HUDSON. New York, D. Appleton & Co., VIII. 256 p. 8°.

THE author of "The Naturalist in La Plata," reviewed on a previous occasion in these columns, has given us in the present volume another interesting book. At first sight the title seems somewhat misleading, inasmuch as the author met with an accident a few days after his arrival in the country and was confined to the house for a considerable period. As, however, he says the book would probably never have been written if the original intentions in visiting the country had been carried out, we may consider the accident a lucky one. His "Idle Days" gave him ample time for thought, and in this as in the previous volume we have many original ideas. The most of the time was spent in the valley of the Black River, and in his chapter upon the valley we note a fact that may be of interest at the present time in view of the controversy going on in relation to palæolithic man in America. In wandering along the banks of the stream he found many arrowheads on the ancient village sites. They were of two widely different kinds, "the large and rudely fashioned, resembling the palæolithic arrowheads of Europe, and the highly-finished, or neolithic arrowheads of various forms and sizes, but in most specimens an inch and a half to two inches long. Here there were the remains of the two great periods of the Stone Age, the last of which continued down till the discovery and colonization of the country by Europeans. The weapons and other objects of the latter period were the most abundant, and occurred in the valley: the ruder and more ancient weapons were found on the hillsides, in places where the river cuts into the plateau. The site where I picked up the largest number had been buried to a depth of seven or eight feet; only where the water after heavy rains had washed great masses of sand and gravel way, the arrowheads with other weapons and implements had been exposed. These deeply buried settlements were doubtless very ancient."

He found that to the inhabitants of the valley, the river was all in all. Beyond its banks spread the gray, desolate desert; within the valley's bounds were light and life. Just as all things were mirrored in its waters, so was the stream reflected in the minds of the people. "Even the European colonists," says he, "have not been unaffected psychologically by the peculiar conditions they live in, and by the river on which thay are dependent. When first I became cognizant of this feeling, which was very soon, I was disposed to laugh a little at the very large place 'the river' occupied in all men's minds, but after a few months of life on its banks it was hardly less to me than to others, and I experienced a kind of shame when I recalled my former want of reverence, as if I had made a jest of something sacred. Nor to this day can I think of the Patagonian river merely as one of the rivers I know. Other streams, by comparison, seem vulgar, with no higher purpose than to water man and beast, or to serve, like canals, as a means of transport." So powerfully did the river impress the native minds that they became incapable of imagining any place to be habitable without it.

In one chapter we have an account of the habits of several breeds of dogs. A Scotch collie was found to take kindly to the wild life in the desert and soon became the leader of the ordinary dogs. But four pure-breed grayhounds, when tired of moping about the house, would take to the desert and course on their own

account, returning, however, in a couple of days gaunt, thin and lame. Having been well fed and recovering their spirits and strength, they would again betake themselves to the desert, to return again to their master's house, worn and thin. These hounds, if left to themselves, would have soon perished, while the collie would have been successful in the struggle for existence.

Anything but a pleasing picture is drawn of the struggle the new settler has with Nature in his new home. Animals, birds, insects, and even inanimate forces are all arrayed against him, but the author considers even the severity of the struggle conducive to the well-being of the individual concerned. "The man," he says, "who finishes his course by a fall from his horse, or is swept away and drowned when fording a swollen stream, has, in most cases, spent a happier life than he who dies of apoplexy in the counting-house or dining room; or who, finding that end which seemed so infinitely beautiful to Leigh Hunt (which to me seems so unutterably hateful), drops his white face upon the open book before him. Certainly he has been less world-weary, and has never been heard to whine and snivel about the vanity of all things."

An interesting account of leaf-cutting ants is given (pp. 138–142), and the bird-music of South America is stoutly defended and favorably compared to that of Europe. He says: "The bird language of the English wood or orchard, made up in most part of melodious tones, may be compared to a band composed entirely of small wind instruments with a limited range of sound and which produces no storms of noise, eccentric flights and violent contrasts, nor anything to startle a listener — a sweet but somewhat tame performance. The South American forest has more the character of an orchestra, in which a countless number of varied instruments take part in a performance in which there are many noisy discords, while the tender, spiritual tones heard at intervals seem, by contrast, infinitely sweet and precious."

Two of the chapters deal with "Sight in Savages" and "Eyes." These have many points of interest which cannot be referred to in detail here. The one on the "Plains of Patagonia" deals with that peculiar topic of why certain scenes, inherently not pleasing or attractive, withal impress themselves upon the mind with wonderful vividness and are always recalled with pleasure. The plains are not possessed of great scenic attractions, for "Everywhere through the light, gray mould, gray as ashes and formed by the ashes of myriads of dead trees, where the wind had blown on it, or the rain had washed it away, the underlying yellow sand appeared, and the old ocean-polished pebbles, dull red, and gray, and green, and yellow." From an elevation "On every side it stretched away in great undulations: but the undulations were wild and irregular; the hills were rounded and cone-shaped, they were solitary and in groups and ranges; some sloped gently, others were ridge-like and stretched away in league-long terraces, with other terraces beyond, and all alike were clothed in the gray everlasting thorny vegetation." There is, also, a striking lack of animal life. "All day the silence seemed grateful, it was very perfect, very profound. There were no insects, and the only bird-sound — a feeble chirp of alarm emitted by a small skulking wren-like species — was not heard oftener than two or three times an hour. The only sounds as I rode were the muffled hoof-strokes of my horse, scratching of twigs against my boat or saddle flap, and the low panting of the dog. And it seemed to be a relief to escape even from these sounds when I dismounted and sat down: for in a few moments the dog would stretch his head out on his paws and go to sleep, and then there would be no sound, not even the rustle of a leaf. For unless the wind blows strong there is no fluttering motion and no whisper in the small stiff undeciduous leaves, and the bushes stand unmoving as if carved out of stone." Day after day he was drawn to these dreary wastes and the peculiar state of mind seemingly induced by them is thus described: "During those solitary days it was a rare thing for any thought to cross my mind: animal forms did not cross my vision or bird-voices assail my hearing more rarely. In that novel state of mind I was in, thought had become impossible. Elsewhere I had always been able to think most freely on horseback; and on the pampas, even in the most lonely places, my mind was always most active when I travelled at a swinging gallop. This was doubtless habit; but now, with a horse under me, I had become incapable of reflection; my mind had suddenly transformed itself from a thinking machine into a machine for some other unknown purpose. To think was like setting in motion a noisy engine in my brain and there was something there which bade me be still, and I was forced to obey. My state was one of suspense and watchfulness; yet I had no expectation of meeting with an adventure and felt as free from apprehension as I feel now when sitting in a room in London. The change in me was just as great and wonderful as if I had changed my identity for that of another man or animal; but at the time I was powerless to wonder at or speculate about it; the state seemed familiar rather than strange, and although accompanied by a strong feeling of elation, I did not know it — did not know that something had come between me and my intellect — until I lost it and returned to my former self — to thinking, and the old insipid existence."

The peculiar state of mind here described the author attributes to a reversion to a primitive and savage mental condition, a state of intense watchfulness and alertness, but without the exercise of any of the higher mental faculties. He believes that man still retains much of the savage in him and this is brought out in wild and desert places, in times of great danger and under many adverse circumstances. This, like many other questions, touched upon or discussed, is food for thought for the reader.

JOSEPH F. JAMES

Washington, D. C.

The Coal-Tar Colors, with Especial Reference to Their Injurious Qualities and the Restriction of Their Use: A Sanitary and Medico-Legal Investigation. By THEODORE WEYL. Translated, with permission of the author, by Henry Leffmann, M.D., Ph.D. Philadelphia, P. Blakiston, Son, & Co.

THE coal-tar colors having replaced the vegetable products in all branches of dyeing, a study of their sanitary relations becomes of great interest, and the more particularly, too, because of their rapidly extending application in the coloration of foods and of articles of daily household use. The call for active legislation in these matters has become imperative, but the exact legal status of the new colors has not yet been clearly defined, nor has their physiological action been sufficiently demonstrated. The civilized governments have passed laws regulating the sale and use of certain coal-tar colors, but, in correspondence with the imperfect knowledge we have as yet attained in this branch of science, these legal statutes proved inadequate and failed in their purpose. To determine by direct experiment the physiological action of the colors in question, and thus to provide a basis for a new and better legislation, was the work undertaken by Dr. Weyl, and this little book upon the sanitary relations of the coal-tar colors, translated from the German by Dr. Leffmann, is the published account of these same experiments, together with much else of importance and interest. The book is somewhat technical, but this need deter no one from its perusal, for, as Dr. Leffmann remarks in his preface, "the essential matter is so distinctly set forth that the chemical portion may be passed by those who are unable to comprehend it." There is no portion that may not be read with profit by all, the technicalities are well masked behind good English, and, thanks to Dr. Leffmann, we have a book of live interest from beginning to end. Reviewing the book critically, we have but one fault to find, and that with the arrangement. It will suffice to name the parts in their order as follows: Translator's Preface, Preface, Contents, Introduction, General Part, to page 34, Appendix, pages 35–60, Special Part, pages 61–148, Appendix, Index. This seems to us an original system of book-making, but, after all, change the *names* of the parts, and we have everything in proper place.

Beginning the book with the General Part, we have a few pages on the preparation of the coal-tar colors, their classification, nomenclature, commercial forms, uses, etc. The so-called poisonous colors are then discussed, and the arsenical nature of many of the earlier manufactures is pointed out. Fuchsine, for exam-