little." Accordingly very little is said, and that little is unimportant. Speaking of objects, Mr. Denning startles us with the announcement that "Comets are not interesting objects in a telescope" (we should like to hear upon what experience he grounds this assertion); and he deals with the hypothetical plant Vulcan by naïvely telling his disciples that when a total eclipse of the sun "is in progress, the region of the heavens in the immediate vicinity of the solar orb should be subjected to very careful scrutiny." For such untutored gazers as are addressed in the earlier pages the data in the later sections are insufficient. There are no times of rising and setting of the moon and planets, no positions of Jupiter's satellites at times of eclipse, no information upon the points on the moon's limb at which occulted stars will disappear and reappear, no warning of the effects which change of geographical position will produce in some phenomena which are computed for Greenwich only. Altogether the book is a very weak production. J. C.

Die Arachniden Australiens nach der Natur beschrieben und abgebildet, von Dr. L. Koch. Erste Lieferung. Pp. 56. Plates iv. (Nurnberg, 1871.)

DR. L. KOCH intends in this work to describe the spiders of Australia, not confining himself apparently to the large insular tract that generally passes under this name, but taking in also the Viti Islands, the Friendly, Pelew, and other groups. In his Preface to this, the first portion of his work, he says that though he has with much care and industry for twenty years observed the Arachnida of a little circuit of not more than from four to five hours walk, yet every year there comes to light within this small compass some new species that had up to then remained concealed; indeed it often happened that each little journey increased the number of forms known in the district. How true this observation is every investigator will feel; but knowing and feeling it, what courage does it not require to set to work to write the history of the spiders of a district which itself is not even yet half explored; and when the spiders are done, we are promised another work on the Myriapods. Such courage deserves to succeed, and we wish the enterprise every prosperity. The work will be published at intervals of two months, and be completed in two years; each bi monthly part will contain four plates and some five sheets of text.

Following the families and genera as laid down by Thorell in his "European Spiders," L. Koch commences with the Epeiridæ, and describes six new species of the interesting genus *Gasteracantha*. Here, as in the other genera, the new species are well figured by the author in quarto plates. It is to be observed that some of the species described are not to be met with, at least have not at present been met with, in any part of Australia, but are introduced into this work by the head and shoulders as it were thus:—*G. violenta* comes from New Guinea, and *G. hepatica* from Java. Two new genera, *Tholta*, with three species, and *Anepsia* for *Epeira rhomboides*, L.K., are given. Ten new species of the genus *Argiope* are described, and three new species of *Cyrtarachne*. The diagnoses of the new genera are very properly given in Latin, and the work may be regarded as quite indispensable to all those engaged in the study of the spiders. W.

LETTERS TO THE EDITOR

[*The Editor does not hold himself responsible for opinions expressed by his correspondents. No notice is taken of anonymous communications.*]

Change of Habits in Animals and Plants

SOME weeks since I sent a few notes on *Nestor notabilis*,* showing a curious change in the history of this mountaineer. I now beg to add an extract from the *Otago Daily Times*, in confirmation of this strange story of the progressive development of change in the habits of the Kea, from the simple tastes of a honey-eater to the savageness of a tearer of flesh:—

"Some time ago we mentioned that Mr. Henry Campbell, of Wanaka Station, had noticed that sheep on his run were frequently attacked by birds. We are indebted to Mr. Campbell for some further information on the subject. The birds in question are of the kind called by shepherds "the mountain parrot," and the scientific name of which is *Nestor notabilis*. The Maories call it the Kea. The birds come in flocks, single out a sheep at random, and each alighting on its back in turn, tears out the wool and makes the sheep bleed, till the animal runs away from the rest of the sheep. The birds then pursue it, continue attacking it, and force it to run about till it becomes stupid and exhausted. If in that state it throws itself down, and lies as much as possible on its back to keep the birds from picking the part attacked, they then pick a fresh hole in its side, and the sheep, when so set upon, in some instances dies. When the sheep stops bleeding the birds appear to cease to attack it, though Mr. Campbell is not very clear upon this point, and thinks they attack it more for sport than hunger. For three winters back his sheep have been attacked in this way, and it was not till this winter (though he previously suspected it) that he found the birds were the offenders. Where the birds so attack the sheep, the elevation of the country is from 4 000 to 5 000 feet above the sea level, and they only do so there in winter time. On a station owned by Mr. Campbell about thirty miles distant from the other, and at the same altitude, in the same district, and where the birds are plentiful, they do not attack the sheep in that way. For those on whose stations they are an annoyance, it may be mentioned that their numbers can be kept well thinned by shooting them. If one is wounded the rest gather round, and can be shot in fives and sixes at a time."

This note is interesting in the face of the destructive influence commonly exerted by *introduced* upon *native* life. Here we have an indigenous species making use of a recently imported aid for subsistence, at the cost of a vast change in its natural habits.

In the vegetable world we meet with a change in the habit of a native species* which is somewhat analogous.

Our *Loranthus micranthus* sometimes neglects its customary supports, found often on such trees as *Melicytus* or *Melicope* (representatives of *Violarieæ* and *Rutaceæ*), for the more attractive exotics, *Cytisus*, *Crœtægus*, the plum, and the peach. Such change in its habits this fragrant parasite acquires at the cost of deserting the interlaced boughs of tangled gully for a more conspicuous position in the trim shrubbery or cultivated garden. At this time I can see a most vigorous specimen of *L. micranthus* growing on *Cytisus laburnum*, covered with countless panicles of perfume-laden blossoms, on which our introduced bee is luxuriously regaling. Here we have the foreign bee gathering sweets from native flowers growing on an exotic tree.

In this neighbourhood the laburnum was first planted, I believe, by myself, in 1859, and the bee introduced about the same time.

Ohinitahi, Oct. 7, 1871 THOMAS H. POTTS

* See NATURE, vol. iv., pp. 489, 506.]

A Case of Stationary Wave on a Moving Cord

IT is well known to mathematicians that a stretched cord, moving lengthwise with a velocity bearing a certain relation to its tension and weight, will retain any curvature which may be impressed upon it; and consequently would pass through a crooked tube without pressure against its sides. That this may be the case, the velocity, V, must equal $\sqrt{\frac{T}{M}}$; T being the tension, and M the weight of the cord per unit of length.

Passing from a stationary curve on a moving cord to one moving along a fixed cord, it is easy to see that this velocity, V, must be that of the transmission of a transverse vibration; and from this immediately follows the formula for the times of vibration of stretched strings.

The case of the stationary wave, however, though simple in theory, is rarely practically realised; and I think a short notice of a case in which it is constantly produced may not be without interest.

In Captain Dennet's admirable invention for saving life from shipwrecks, a rocket is employed having a light line attached to it. This line is previously "faked down" on two rows of pins in a box; and, the pins being withdrawn, it remains in a series

* See Trans. New Zealand Institute, vol. iii., p. 190.