

## MISCELLANEOUS.

## JOURNEY TO EXPLORE THE PROVINCE OF PARÀ.

MESSRS. Wallace and Bates, two enterprising and deserving young men, left this country last April on an expedition to South America to explore some of the vast and unexamined regions of the province of Parà, said to be so rich and varied in its productions of natural history. They have already forwarded two beautiful parcels of insects of all orders, containing about 7000 specimens in very fine condition, and a vast number of novelties, besides other very rare species, some of which were known only to the entomological world by the beautiful figures in Cramer and Stoll, and a few shells and bird-skins. The last parcel is the result of their journey up the river Tocantins. The following passage is an extract from their letter to Mr. S. Stevens, dated Parà, Oct. 23, to whom the consignments have been forwarded, and who has the disposal of them (see Advertisement on cover).

“ If any one is curious about our trip up the Tocantins, you may inform them that we ascended to about the 4th parallel of S. lat. near the Rio Tabocas, having reached Arroya, the last abode of civilized people, and passed a little beyond to view the rapids called Guaribas. We hired one of the heavy iron boats with two sails for the voyage, with a crew of four Indians and a black cook. We had the usual difficulties of travellers in this country in the desertion of our crew, which delayed us six or seven days in going up; the voyage took us three weeks to Guaribas and two weeks returning. We reached a point about twenty miles below Arroya, beyond which a large canoe cannot pass in the dry season, from the rapids, falls and whirlpools which here commence and obstruct the navigation of this magnificent river more or less to its source; here we were obliged to leave our vessel and continue in an open boat, in which we were exposed for two days, amply repaid however by the beauty of the scenery, the river (here a mile wide) being studded with rocky and sandy islets of all sizes, and richly clad with vegetation; the shores high and undulating, covered with a dense but picturesque forest; the waters dark and clear as crystal; and the excitement in shooting fearful rapids, &c. acted as a necessary stimulant under the heat of an equatorial sun, and thermometer  $95^{\circ}$  in the shade. Our collections were chiefly made lower down the river. During the five weeks of our journey we had no rain till the last two days. The weather here is as delightful as ever; the mornings invariably fine, and a shower in the afternoon every third or fourth day, which cools and refreshes everything delightfully. The heat is never oppressive; the nights always cool; there can certainly be no climate in the world superior to this, and few equal. Since sending our last collection, we have had further experience of the rarity of insects in this country. The Lepidoptera are numerous in species, but not in individuals; the Coleoptera are exceedingly scarce, and other orders are gene-



rally, like the Lepidoptera, sparing in individuals; we attribute it to the uninterrupted extent of monotonous forest over which animal life is sparingly but widely scattered. However this makes a difference in the commercial value of the subjects. The present collection is the fruits of two months' devoted and almost exclusive attention to insects. Shells and Orchids continue to be exceedingly scarce."

*How to prevent the Attacks of the Bed-bug, Cimex lectularius.*

By JOHN BLACKWALL, F.L.S.

*To Richard Taylor, Esq.*

Oakland, December 7th, 1848.

MY DEAR SIR,—A short communication of mine, printed in the 'Annals and Magazine of Natural History,' second series, vol. ii. pp. 357–359, recommending the adoption of a method of preventing the attacks of the bed-bug, founded on the fact, established by observation and experiment, that this loathsome insect, in consequence of not being provided with a climbing apparatus, is incapable of ascending hard dry bodies having highly polished perpendicular surfaces, has elicited, I perceive, a few strictures from the pen of your correspondent Walter White, Esq., to the purport, that the plan proposed is neither new in kind nor efficient in operation ('Annals and Magazine of Natural History,' second series, vol. ii. pp. 457, 458).

To the spirit in which the strictures are made, no objection can possibly be entertained; but I may be allowed to remark, that the sole object I had in contemplation when obtruding upon the readers of your widely-circulated Journal my thoughts in connexion with this practical application of entomological knowledge to the domestic comfort of thousands of human beings, was public utility; whether the scheme propounded had novelty to recommend it or not, I had small means of ascertaining, and, indeed, did not stop to inquire, being satisfied that, speaking generally, it was, at all events, either unknown or strangely disregarded.

With reference to the only circumstance advanced by Mr. White as militating against the efficacy of the project I have enunciated; namely, that bugs are in the habit of crawling up walls and along ceilings until they perceive that they are directly over beds, when they quit their hold of the plaster and drop upon them, I would observe, that although neither reading nor personal experience had made me acquainted with this remarkable instinctive phenomenon in the natural history of the bed-bug, yet the idea had occurred to my mind that such a descent might sometimes happen accidentally; but that as it would probably be a rare event, and, except in the case of an impregnated female, would not be likely to produce permanent inconvenience, any special provision to counteract it was deemed unnecessary. Considered as the result of an innate propensity this act assumes a widely different character, and it becomes a matter of importance to determine in what manner it can be guarded





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