

fore now recommended, in circular No. 5, an investigation of possible thought-transference in case of the ideas of geometrical forms, the first set of experiments reported on in appendix B having especially dealt with conceptions of number and color.

'Results,' we say, the sensation-seeking public cannot just yet find. But then the word 'results,' as we here quote it, is not identical in meaning with what science usually calls results. For many people, psychical research is nothing, unless it finds wonders; and by 'results' such people mean something to marvel at. But psychology is *not* concerned to find marvels; and the negative outcome of these experiments, as thus far developed, is neither disappointing nor fruitless. The existence of thought-transference of some sort has, indeed, so far been neither proved nor disproved by the work of the society. And, as was known at the outset, the range within which thought-transference can noticeably operate, has long been shown by the practical tests of daily business and social life to be at least a decidedly limited range; since, as a fact, we find it constantly possible to keep important secrets of all common sorts from curious intruders by the simple device of strict silence concerning them. Yet even the negative answer of the experiments is, so far as it goes, already a valuable answer; and, most important of all, the lines of experiment now begun already promise to prove fruitful beyond the range of the direct discussion of thought-transference.

As is shown in the report on the answers to circular No. 4, the effort to discover the existence of thought-transference in case of the number-concepts has led to the observation of certain tendencies in the mind of at least one 'percipient,' to follow certain systems of association in giving his numbers. Minute as seems at first sight the importance of such observations, it is out of just such facts that fruitful generalizations have grown elsewhere in the sciences of experience; and so it may be here. In fact, if we may venture a guess as to the future, it would be the very presumptuous conjecture, that the society may find its search for thought-transference, and for other phenomena of the mental El Dorado, as that region is now popularly conceived, a search in the end somewhat like the well-known quest upon which Saul went, just before he found his kingdom. In short, — guesses about the future results aside, — there is so much to be done for the theoretical and practical needs of psychology, so much experimental research necessary for the formation of a science that may yet

have vast influence upon the art of education, upon the treatment of the insane, and upon the policy of society towards criminals, that all experimental beginnings of such a science in any direction must be greeted with satisfaction. If thought-transference is in any mental region a fact, we shall rejoice to find it; but, if these investigations render it less probable rather than more so, they are still certain, under their present, cautious, and yet highly liberal management, to lead to other psychological discoveries that will be worth far more, very possibly, than the ones first sought. Let us hope that the members and the public will recognize more and more, as time goes on, the wisdom that led the earliest founders of the society to define its object broadly as "the systematic study of the laws of mental action." In this programme there is no sign of any unscientific limitation of work to the 'uncommon' or 'marvellous,' or 'little recognized,' phenomena of mind; although these too, when one meets with them, are to be cordially welcomed. But the society simply starts out to do scientific work without prejudice, and with scientific co-operation and patience. This first number is of course confined in its range of work; but the co-operation is well shown, and the patience in the discussion of the least exciting details is noteworthy and deeply instructive.

In addition to the mentioned papers, we find in appendix C a discussion of the "Possibility of errors in scientific researches, due to thought-transference," by Prof. E. C. Pickering. This paper treats of a test offered by the systematic observations on the magnitudes of the stars, for determining the existence or non-existence of thought-transference between the recorder and the observer. The result of the special application of this method to observations made at Cambridge, is, for the present, negative; but further application is promised. The whole pamphlet is unassuming, clearly written, and, to any sober student, helpful.

ATLAS OF PLANT-DISEASES.

THE first number of this work, by Dr. Zimmermann, consists of two folio plates, with thirty micro-photographs of different stages of three common species of Puccinia, together with a short notice of fungi, as the cause of diseases on plants, with special reference to the Uredineae. The text is well adapted to the

Atlas der pflanzenkrankheiten welche durch pilze hervorgerufen werden. By Dr. O. E. R. ZIMMERMANN. Halle, 1885.

wants of gardeners, agriculturists, and amateurs, for whom it is intended; but it may well be questioned whether the photographs convey so good an idea of the subject as can be obtained from the almost numberless wood-cuts, and other illustrations in the text-books of plant-diseases. Naturally, the best figures are those which represent the teleutospores; but even these are no better than most of the wood-cuts with which the botanical public is already sufficiently familiar; and the figures giving the gross appearances of the fungi, both in their uredo and aecidial conditions, are almost worthless, although the original preparations were evidently excellent. However valuable photography may be in representing minute forms like bacteria, or certain structures which can be seen with very low powers, it is evidently not adapted to those plants which, like ordinary moulds, rusts, etc., require a moderately high power. The execution of the plates of the atlas is as good as that of any similar work which we have seen; but, judging by the result, it would seem to be better to abandon photography altogether in such cases.

NOTES AND NEWS.

— THE Kongo conference makes its appearance in all the geographical periodicals, generally accompanied by a map of greater or less value. We shall ourselves publish a map in our next issue. Besides innumerable lectures and addresses, the republication of the conclusions of the international commission has been made by nearly every geographical periodical of note. Karl Winter of Heidelberg has just issued a neat pamphlet of a hundred and twenty pages, in which the history and final agreement, forming one of the most remarkable results of modern civilization, are set forth clearly and briefly by C. A. Patzig, with the title, 'Die afrikanische konferenz und der Congo-staat.'

— The mittheilungen of the Vereins für erdkunde zu Halle an der Saale for 1884 is largely devoted to Thuringia. Rackwitz has an anthropological article illustrated by an interesting chart of the distribution of antiquities, customs, boundaries of dialect, etc.; Reischel, a discussion on the orohydrography of the central Thuringian basin; Edler discourses on sun-spots; and David Brauns furnishes an interesting paper on the distribution of vertebrates in Japan.

— The Argentine expeditions into Patagonia have raised the credit of that country, which has long been supposed arid and sterile. The report of Gen. Villejas, and that of Col. Roa who has travelled more than five hundred leagues in Patagonia, affirm that the region near the base of the mountains is rich, not only in metals and minerals, but in fertile valleys

which nestle between spurs of the range. With steam-transportation between the mountains and the coast, it is affirmed that rapid growth of population might be expected, and prosperous communities be established.

— The expedition of Dr. Bunge of the Lena international station had not been heard from for some time, and some anxiety was felt for its safety. A recent telegram announces its safe arrival at Yakutsk.

— Sibiriakoff, the wealthy Russian merchant, well known as the friend and patron of Nordenskiöld, has himself made an interesting journey during the summer of 1884. The details of it are only now made public, as news travels slowly in those regions. He ascended the Petchora to Oranets, then crossed the Ural to the Sigva or Whitefish River, which joins the Sosva, an affluent of the Obi. The traveller reached Shikurik Sept. 21, and Tobolsk Oct. 18. It is demonstrated by this journey, that a trade route by which goods can be carried in summer is practically open in this direction, a matter of great commercial importance to Siberia.

— J. Chaffaujon has been engaged in exploring the region of the Orinoco, and has already rectified many errors of the charts of its course. He has started from Bolivar, Venezuela, on another journey, which is expected to take him into unknown districts of its head-waters.

— A work interesting to the philologist, geographer, and anthropologist, is that of l'abbé Pierre Bouche on the slave coast and Dahomey. The author spent seven years among the black barbarians of this region, and became familiar with their vices and virtues. It is furnished with a map, and issued by Plon at Paris. The same firm are publishing a large number of geographical or partly geographical works at very modest prices. Among these may be noted a translation of Gilder's 'Rodgers' expedition,' Clapin's 'Le Canada,' and Count Raymond de Dalnias' 'Les Japonais,' which has had a very favorable reception. A life of François Garnier, the French Cortez of Anam, has been published by Dreyfous. Recent events in Tonkin have recalled his marvellous career and romantic death, which, embodied in a novel, would have been criticised as too improbable for literary art.

— Further particulars of the fate of the African explorer, Richard Boehm, have been received in Germany. He died of fever, caused by over-anxiety and fatigue, on the 27th of March, 1884. His camp was in southern Urna, — three days' journey from Lake Upamba, recently discovered by him and Reichardt. After the death of his companion, Reichardt tried to go on alone to the sources of the Lualaba, but was obliged finally to fight his way back. The letter just received from him is dated from Karema on Feb. 20 of this year.

— A telegram received at Berlin from Alexandria announces that the African travellers, Dr. Juncker and Casati, have arrived at Lado, an Egyptian mili-