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LEMURIA, THE LOST PARADISE.

In our review of Mr. Alfred Wallace's new conclusions relative to the geographical distribution of animals, we noted his very important statement that the study of the present habitations of both animals and plants may add greatly to our knowledge of the past history of our globe. In fact, the chief deduction which Mr. Wallace draws from his extended investigations is that such study may reveal to us, in a manner which no other evidence can, which are the oldest features of the earth's surface, which the newest, and which have sunk beneath the ocean and thus been blotted out for ever. It will be seen, therefore, that in the study of organic life we are brought face to face with one of Nature's own records. As in the rocks she writes of the birth of new continents and new islands, and of the time when, and the conditions under which, these mighty additions to the earth's surface were made: so in the habits of organized creatures she conceals the history of her destructive work. By the aid of such knowledge as to past organic mutations as the geological record supplies us with, we can determine the probable birthplace and subsequent migrations of the more important genera and families; and in this way, while reaching a forms and geographical distribution of existing animals, at the same time we embark on a quest of lost lands.

It is a remarkable fact that traditions substantially agreeing with the Biblical account of the Deluge exist among every known people on the earth. Among the Hindoo3, Greeks, Chinese, Mexicans, Peruvians, Feejee Islanders, the legends are closely similar; and it is but recently that, from the clay tablets of the Chaldeans, the late Mr. George Smith deciphered still another account of a great flood. It is besides true that, among a great many peoples, there are traditions of countries which no longer exist. Even on old Venetian maps the lost island of Atlantis, lying west of the Azores, prominently figures. The Greek geographers mention the island; and its sea kings, tradition says, invaded Europe and Africa, but were defeated by the Greeks and their allies. Whether that land was a myth, or whether it was America, is an open question (in view of Dr. Schliemann's discoveries, it is perilous to pronounce any ancient legend baseless); but this aside, the story goes that the Atlantides became so desperately wicked that a deluge swallowed up their island. Biblical critics, or at least the majority of them, have long since recognized the fact that, unless the supposition of a series of the most stupendous miracles be made, the theory of the Deluge covering the entire earth must be set aside; and, in lieu thereof, the view is preferred that the flood covered only the small area forming the basin of the Euphrates and Tigris rivers, which then was the sole region occupied by the human race. If, however, we couple the two traditions, namely, deluges and lost lands, there will appear a probability that all relate to similar phenomena, which continents by the sea. Therefore it might be a more scientific view of the Flood to ascribe it to this well understood man was still confined to the little region in Mesopotamia.

evidence, in Ceylon and South India, all going to show that created to-day, and everybody began existence with un-

the probable cradle of humanity. The basis of his inquiry is the fact that the more highly integrated creatures are the newer, the less perfectly integrated, the older; and measured by this standard, Australia and South America are speedily eliminated from the question. North America has remained primitive in the second highest order of mammalia. Our continent has no tailless ape; and it is where the highest animals appear-the chimpanzee, the gorilla, and the orang -that we must also look for man. Searching through the Old World, the lowlands of Siberia are geologically too recent; while if Europe had been the starting point, we should have found fossil men, as we have fossil apes. In Southern Asia, British India has been studied geologically with great minuteness; and judging from the types of mammals found, our primordial parents cannot be localized there.

The inquiry is now narrowed down to Lemuria, a continent, Peschel asserts, required by anthropology; for we can then conceive that the inferior populations of Australia and India, the Papuans of the East Indian Islands, and lastly the negroes, would thus be enabled to reach their present abode by dry land. Such a region would also be climatically suitable: for it lies in the zone in which we now find the conception of that grand series of co-ordinated changes in anthropomorphous apes. The selection of this locality, the earth and its inhabitants, whose final result is seen in the Peschel points out, is far more orthodox than it at the first glance might appear; for we here find ourselves in the neighborhood of the four enigmatic rivers of the Scriptural Eden-in the vicinity of the Nile, the Euphrates, the Tigris, and the Indus. By the gradual submergence of Lemuria, the expulsion from Paradise would also be inexorably accomplished. To this may be added that ecclesiastical writers, such as Lactantius, the venerable Bede, Hrabanus Maurus, Kosmos Indicopleustes, and also the anonymous geographer of Ravenna, placed the Scriptural Paradise in Southeastern Asia, and some explicitly state that it was on a detached continent, and that the ingenious maps of the middle ages exhibit the first parental pair on a land surrounded by sea. lying beyond India, This explains how Columbus, after the discovery of South America, taking it for an insular continent lying southeast of the mouth of the Ganges, wrote home to Spain: "There are great indications suggesting the proximity of the earthly Paradise, for not only does it correspond in mathematical position with the opinions of holy and learned theologians, but all other signs concur to make it probable."

> Herr Peschel's hypothesis need not disquiet those who prefer to believe that Paradise was nearer to the eastern lands of the Scriptures. Its value, its author states, is that "it challenges a geological investigation of Madagascar, Ceylon, and the island of Rodrique, as well as deep sea soundings in the Indian Ocean, to ascertain whether vestiges exist of the higher points of vanished Lemuria."

-----CITY ARCHITECTURE.

There is a widely extended discussion now going on as to are the subsidence or overflowing of islands or portions of the merits of the better class of houses built in these days. Dr. Richardson attacks them on sanitary grounds, and his condemnation is as sweeping and as unreasonable as that of natural action than to venture so violent an hypothesis, even Mr. Ruskin; and the only remedy which these gentlemen on the Mosaic account, as that, 1656 years after his creation, propose for the people of Great Britain is to sweep away every dwelling from one end of the island to the other. Such In the whole range of deductions reached by the study of exaggerated statements come naturally from the lips of Mr. the distribution of animals, there is none more striking than Ruskin, whose æstheticism does good by inculcating a taste that which proves that a vast continent once existed extend- for correctness and purity in style and for genuineness and ing from the island of Madagascar to Ceylon and Sumatra. thoroughness in work; but Dr. Richardson has more utilita-Examination of the fauna of Africa and of Madagascar shows rian aims, and such wild propositions serve only to repel that in Africa, especially in the east, there is an abundance of people from the consideration of the many sensible suggeslarge ungulates and felines (elephants, lions, etc.), all of tions which he has made. Although it may be theoretically types now or recently found in India and Western Asia. true that a kitchen should be at the top of the house, it is Again, the fauna of Madagascar is wanting in all the larger not necessary to destroy a dwelling that has one at the botand higher African forms, and has a wonderful resemblance tom; and the people who live in modern houses are not so to that of Malaya and South America. We are, therefore, contemptible, either physically or morally, that their homes sure that Madagascar must have been separated from Africa should be demolished at the instance of these architectural before the assemblage of large animals, above referred to, reformers on account of their unfitness for habitation. Arhad entered. There is proof that, during early tertiary chitects and hygeists would do much more for their contemtimes, a continuous sea, from the Bay of Bengal to the British poraries, and for art and science too, if they would show us Isles, completely cut off all land communication between how to make the best of what we have; to ventilate thor-Central and Southern Africa on one side and the great con-joughly our basement kitchens rather than to tear down our tinent of the eastern hemisphere on the other; so that houses; to lead our sewer gases away from our houses rather Southern Africa and Madagascar were then united, and the than to pull down one side of the structure to build a gas latter island helped to form the great continent over which shaft; in short, to improve the homes we must live in rather the tribe of lemurs were distributed. There is geological than to dream about those we might have if the world were

one of the most experienced florists. In this valuable practical paper he illustrates clearly how to heat single and double greenhouses with the least expense; gives the plans for the flues and the full costs for construction of the houses.

V. NATURAL HISTORY, MICROSCOPY, ETC.-Pollen. By W. G. SMITH. Being a Microscopical Examination of the Pollen of various well known flowers and plants. With 94 illustrative figures. A valuable and interesting paper exhibiting the beautiful forms of pollen grains, their most prominent characteristics, of especial interest to florists. indicating the plants best suited for hybrizidation, etc .-- Practical Value of the Microscope

PUBLISHERS' NOTICE.

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those physical divisions were bounded on the north by a bounded wealth,

considerable extent of sea, and hence probably formed part Of the comfort and wholesomeness of the better class of American houses it is impossible too speak too highly. The of a great southern continent. If we suppose that this hypothetical land occupied the whole area now inhabited by ventilation is generally well provided for, and the heating is lemuroid animals, we must extend it to Burmah, South equable, and the temperature moderate; dryness in the China, and the Celebes. cellars is an object which our architects spend much

Having established the possibility of the existence of this pains to achieve; and usually ample light is admitted into last continent, Lemuria, we need follow geology in the perthe front and back rooms of our houses. But our readers will at once see that we speak of the houses found in the son of Mr. Wallace no longer, but pass to Herr Peschel's views of the great importance of this hypothesis to the hisbetterquarters of our large cities; and our tenement houses tory of our race. Peschel, in his chapter on the first home in crowded neighborhoods, and many of the flimsy frame of humanity, states that all oceanic islands, when first disstructures in rural districts, are scarcely capable of improvecovered by European navigators, were uninhabited; and ment without razing the entire structure. The evils in the from this and other considerations, he concludes that the first first are due to heavy taxation, which compels landlords to human beings were inhabitants of a continent. Then, by crowd their tenants on to the smallest possible area, and to examining into the resemblances of various peoples, he log- the inability of tenants to pay rents for large apartments. But ically reaches the view that all our race, starting from a there is no reason why large buildings, each accommodating common habitat, may have gradually ranged over all conti- a great number of families, should not have every necessary nents and peopled them. He next takes each grand division provision for health and convenience. The houses of the of the earth in turn, and, by studying its zoölogical forms building corporations in London and other European cities, and their changes, he seeks to determine which division was which have been built especially to solve the problem of

of population.

the smaller and cheaper houses. Although many of these who is the highest scientific authority now, the Commissioner sion; and in place of being a source of attraction they will are well provided with modern contrivances for saving labor who signed General Pleasonton's patent or the present in-; diminish this attraction, and take from the impending disand adding to the convenience of their inmates, they are cumbent, or which one of the numerous gentlemen who have charge a great deal of its violence. characterized by two bad practices, namely, disregard of adorned that office for brief periods in the past. Besides. hygienic laws and fimsiness of construction. The excellent to claim that, because something is patented, it is necessarily points are desirable as upper terminalsof lightning rods; and system of heating by furnaces placed in the basement is scientifically sound and of major importance, betrays but a experience fully verifies this conclusion by practical results. vitiated by making the heaters too small, so that they are small acquaintance with inventions in general. The Patent One of the oldest instances took place in the tower of the overdriven in cold weather, and the air passing through Office does not indorse any device. The patent is simply cathedral of Siena, in Tuscany, which had been very frethem becomes too dry, thus rendering the lower rooms of granted on prime facie evidence that the idea is new and quently damaged by lightning. In 1776, a lightning rod was the house unhealthy; and it has been shown by the experi-useful; and in endeavoring to extend the benefit of the pro-cerected; but the people objected, and some of the priests ments of General Morin, Director of the Conservatoire des tection to inventors, the examiners favor the latter, or should called it an impious contrivance, invented by a heretic; but Arts et Métiers in Paris, that air currents in contact with do so, in the highest degree, acting favorably whenever there when it was found that the tower was rarely struck, and that red hot iron become absolutely poisonous. It is safer, says is a possibility of the existence of even a germ of some once during a heavy thunderstorm the stroke followed the Mr. James C. Bayles in an excellent paper on city architec. future better conception. As it is, the Patent Office rejects lightning rod without doing the least damage, the heretical ture in the International Review, to keep the temperature of 'very many more applications than it ought to; and on the contrivance came into proper esteem. The starlike terminathe surfaces of a heating furnace below 500° Fah. Again, other hand, it is constantly erring, often egregiously, in tions of some lightning rods are injurious. Faraday has by faulty construction, many of these furnaces carry car- granting absurd claims. Because the Commissioner of Pat- proved that a single point discharges and absorbs electricity bonic oxide and sulphurous gases into the apartments.

and yet it is little understood. That provided by the open is chargeable to the examiner, as of course the Commissioner mutual interference; until at last, when the top is surrounded fireplace is nearly perfect; and difficulties on this subject knows nothing of the immense majority of patents to the with an infinite number of points, a ball is the result, and are found mainly in small houses heated by hot air. Draughts documents of which his signature is appended in advance), the silent discharge ceases altogether. of air in such houses are frequently kept out with weather certainly the General cannot convince sensible people that strips, and air is only admitted by chance opening of doors. his abnormal theories obtained any indorsement. The plumber's work is another defective element in these responsibility of the architect becomes of the utmost impored previously explained and a distinguished physician of this course, a well (not a cistern), or at least with the moist ground, tance.

seldom spreads beyond the room in which it originates.

THE WORKING OF PATENTS IN CANADA.

manufacture of the invention or discovery must be commenced within the realm within two years from the date of of the whole subject, even if by not doing so we earn the lightning rod, which in its upper end was connected with the the patent, or the latter becomes void. Another clause in imputation of closet theorists. Our long experience in deal- spire, was pulled out of the ground, and lay on a pile of firethe same section declares that a patent shall be void if, after ing with circle squarers, perpetual motionists, Keely motor wood in the rear of the church. If this church had been the expiration of twelvemonths from the granting of a patent, people, and now blue glass adherents, besides al. the other de-struck and burnt down, it might have been pointed out as the patentee or assignee causes to be imported into Canada | ceptions rife in the mechanical and scientific world, enables an example of the utter uselessness of lightning rods. the invention for which the patent is granted. A clause was us to bear such animadversion with unruffled equanimity. subsequently added, however, granting the Commissioner the privilege of extending the time for introducing an invention beyond the two years if application is made to the requirements.

that it was sufficient to hold the patent by importing into thunderclouds to the building to be protected, and induce prodigality more than heroic. The requirements of business the country various parts of the entire machine, and putting discharges there, and it is claimed that long, upward pro-are making this method of living more imperative, and wthaccord with the spirit or intent of the law; but in a case discharges, they become a source of danger by attracting the dustry were then unknown. A new order of mind and new which recently came before the Commission, he rules "that electrically charged clouds, and making discharges more fre- energies are called into requisition. The business man of the respondent having refused no one the use of his inven- quent. Let us test this reasoning by the well known laws of the last generation would hardly be recognized by the pretions, and that the importation, assented to by him to be electricity. made, being inconsiderable, having inflicted no injury on The amount of electric attraction depends on the extent of hardships, but the delicate nervous organization, its accom-Canadian manufactures and having been so count nanced, the attracting surfaces, and on their distance. If a series of paniment, breaks down at length under the incessant tension. not in defiance of the law, but evidently as a means to create clouds, say of a square mile in extent, floats over the earth's Disregarding the friendly premonitions of temporary illness, a demand for the said inventions, which the patentee intended surface, these clouds being charged with positive electricity, the exhausted mind holds on its work by the necessary and

----POINTED LIGHTNING RODS.

to manufacture, and did, in fact, offer to manufacture in they will induce, in that part of the earth's surface within agreeable stimulus of fresh excitements, until a sudden re-

health and comfort in crowded neighborhoods, have a lower tleman's personal integrity. General Pleasonton, then, in electricity as the main duty of lightning rods. Projecting death rate than many districts where the inhabitants are support of his theories, triumphantly claims that they must be points do not attract the thunderclouds; but elevated portions wealthy and the number of people to the acre small; and well founded, because "the highest scientific authority in the c." the ground, as well as trees and houses, when in conducting this alone shows that the exceptionally great mortality in country "-to wit, the Commissioner of Patents-has granted communication with the earth, become charged by induc-New York and other large cities is not due solely to density a patent on their application. That the above official tion, and then exert attraction, whether there are pointed rods is ex officio the greatest of American scientists will be in the vicinity or not. The latter will, by their property of But the chief faults in city architecture are to be found in amusing news to our readers. It raises the question as to silent gradual discharge, serve to diminish the electric ten-

We must, therefore, come to the conclusion that elevated ents, in allowing General Pleasonton's patent, made a very faster than a bifurcated or trifurcated terminal; if more Ventilation is a subject on which much has been written, sorry blunder (which, by the way, we are inclined to think points are added, still slower becomes the discharge, by their

But the upper pointed terminal is not the main part of the lightning rod; because it may be omitted altogether, The remainder of General Pleasonton's letter is but a re-'although it is better to attach it. The main part is the houses; and the dread zymotic diseases which arise from affirmation of his interpretation of his alleged results; and ground connection; and as this is out of sight, it is often sewer gases bear terrible witness to the truth of this state- the assertion that blue glass alone does not produce the bene- shamefully neglected. Much ignorance prevails in this rement. These diseases cause nearly 30 per cent of the total ficial effects claimed, but that they are wholly due to "as- spect also; hence it frequently happens that the electric curmortality of New York city. And the difference between sociated light." Associated right in his grapery came through : rent leaves the rod, to enter the house and pass off by the good and bad plumbing, says Mr. Bayles, is so slight as to one eighth blue glass and seven eighths clear glass. Sunlight gas, water, or sewer pipes; and in its course it sometimes escape the notice of any but a trained expert, and here the through blue violet glass, spectroscopically examined, as we causes considerable damage. A connection with a water city has since corroborated our statement by further experi- is not imperatively necessary. If the soil is silicious and The want of solidity in the building of cheap houses is ment-is nothing but sunlight diminished in intensity. naturally dry, it is best to drive some pointed iron bars into the cause of the destructiveness of fires in this country. Mr. Therefore General Pleasonton's claim now is based on pure sun- the ground in such places as they are most likely to reach Bayles averages our annual losses by fire at \$100,000,000. light, one eighth of which is diminished 90 per cent: in other moisture, and connect all their upper ends with the conduct-Structures in which cheapness was the only consideration of words, sunlight weakened $\frac{9}{90}$ in intensity, according to Mr. ing rod. The rule that requires a conducting surface equal the architect are in many places so numerous that solitary Gaffield's data, elsewhere noted. As General Pleasonton de- to that of the roof to be protected, to be buried in the ground, buildings considered fireproof are destroyed by the fierce-votes a considerable part of his letter to informing us on given by some would be authorities, has no foundation either ness of the conflagration which rages round them. That what we based our own criticisms-a favor on his part quite in theory or practice. It is not the electric charge of a roof this can readily be remedied is shown by the example of unnecessary, as well as wholly mistaken in its premises; which has to be disposed of, but that of a cloud over it; and many European builders, whose cement floors and well plas, and as a still larger part is given up to mere assertion, the latter has sometimes an extent of several square miles. tered woodwork are uninflammable, and in whose houses fire mingled with curious misunderstandings of our very plain All reported failures of lightning rods may be traced to destatements, we think that no further notice of his epistle is fective connections. especially ground connections. Rods required. For the benefit of sundry blue-glass-crazed con-that are faulty from the outset are often made useless by temporaries, we would add, however that we see no neces usbsequent neglect: as we found some years ago at the vil-A section in the patent law of Canada requires that the sity of repeating the large number of experiments-some lage of Gilboa. Schoharie county, N. Y. The church was dating back two centuries-which very positively disposed situated on a hill, and quite exposed; the under end of the

Excitement the Stimulus of Business.

There are a numerous class of men who live almost entirely The important question as to the proper form of hightning upon excitements. In a calm dispassionate flow of life and Commissioner not less than three months previous to such rods occupied the minds of many savants some 75 years ago, business they are stupid and powerless; but stir up the placid expiration, and if ample evidence is adduced that it has been and filled part of the scientific journals of that period. It sea until it surges with violence, and they are then ready for beyond the patentee's control to comply with the two years' has lately been renewed, and, as formerly, there are defend-a mission-armed and equipped for the toil of life. Such ers and antagonists of the pointed rods. It is argued by the minds are the martyrs of this age of enlightenment-the life Some parties who took patents two years ago have supposed latter that the object of a lightning rod is not to attract the they lead is a consuming one, and vitality is spent with a them together in a Canadian manufactory. The able Com- jecting lightning rods do this very thing, and that, although out it success is beyond a reach. Half a century since the missioner, Mr. Taché, decides that such importation does not they are a protection in one sense, giving a ready path to the rivalries now experienced in all departments of human invailing caste. Flesh and blood are capable of enduring many

Canada, he has not forfeited his patents."

he intends to construe the laws in a spirit of liberality the direction of the attraction; until at last, when the distance prejudice to the interests of Canadian manufactures.

THE BLUE GLASS DECEPTION.

blue glass notoriety, has appeared in the columns of an evening journal of this city. The missive relates to our recent tion as their quantity and intensity were greater. criticisms on the writer's alleged discoveries. It is altogether the facts and arguments we have advanced.

the attractive influence, negative electricity. This charge will action crushes its vigor, and then comes on the weakness, It is evident from this decision of the Commissioner that increase as the distance decreases, as the clouds follow satiety, and sorrow of hopeless infirmity.

It is not without a shade of melancholy that we notice in towards the foreign patentee when it can be done without becomes small enough, an explosive discharge takes place, the almost every daily journal the record of a faltering in the stroke of lightning consisting in the simultaneous discharge ranks of business men. This successful merchant or manuof positive electricity from the cloud to the earth, and of facturer has impaired his health by overwork, which means negative electricity from the earth to the cloud. The mani- too much nervous excitement, and he starts for Europe in An open letter addressed to us by General Pleasonton, of festation of light and heat is the simple result of the neutral- the hope of building up his health on a broken foundation. ization of the two electricities, and will be greater in propor. Another professional man is aroused from his dream of ambition with the frightful conviction that phthisis has fastened

Looking at the subject exclusively from this point of its deadly grasp upon his vitals, and the grim images of too lengthy for reproduction here, nor is such publication view, all that appears necessary is to provide a readypath to weakness and decay henceforward fill his vision. There has otherwise necessary, masmuch as it clearly shows that its the electric discharge, such as a rod made of good conduct-¹ been an alarming increase of disease within a few years, author has not perused our articles with any degree of at ing material, of sufficient capacity to be uninjured by the having its origin in the causes we have named, and the tention, or else that he totally misapprehends the nature of strongest current, and well connected with the ground, so as effect of it should be to produce greater moderation. to establish at the moment of discharge a perfect communi What if the profits are less? They can be continued longer The main point of General Pleasonton's letter is an objec- cation between the cloud and the earth, which, previous to and life made happier.

tion to our use of the word "deception," a term which we the stroke of lightning, were charged with opposite kinds of There is no necessity for this waste of life-it is a sheer employed, advisedly, since we believe that General Pleason | electricity. If we consider the function of elevated points delusion, the effect of a foolish ambition. Better accept the ton deceives both himself and the public, a view which we on lighting rods, we find that Benjamin Franklin was correct heritage of poverty or a moderate success than the infallible can hold without casting the slightest imputation on the gen | when he recognized the gradual absorption or discharge of necessity of an early disease.-Hunt's Merchants' Magazine.