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Ashbel Green

ART. I.—*Address delivered to the Theological Students of the Princeton Seminary, N. J., at the close of the semi-annual Examination in May, 1835.* By ASHBEL GREEN, D.D.

MY BELOVED YOUNG BRETHREN—*Candidates for the Gospel Ministry:*

For the fourth, and probably the last time, it has become my duty to address you—on your retiring, for a short period, from this Seminary. On a former occasion, when this service was allotted to me, I endeavoured to show, among other things, that it is erroneous and idle to expect that improvements may be made in revealed or Christian Theology, similar to those which have been, and still may be made, in the secular sciences. This opinion has since been controverted in this place; and, as I am persuaded, not only of the justness of the opinion, but of its great importance, I propose at this time to offer something in its vindication, and something to expose what I apprehend to be the dangerous tendency of its opposite.

The whole argument opposed to the sentiments I have heretofore advocated, and am still disposed to maintain, so far as I have seen or heard, is one of analogy. It may be summarily stated thus:—Since it is undeniable that, in modern times, great discoveries and improvements have been

defended by him so ably, and those in which we differ so comparatively unimportant, and so candidly and modestly brought forward, that we cannot but feel that we are essentially with him on the great doctrine of original sin, against all descriptions of Pelagians and semi-Pelagians. When the foundation is attacked, it is no time for the friends of truth to waste their energies and time in disputing about the precise shape and position of every stone which composes it.

But as Dr. Woods comes up so very near to what we deem the true standard of orthodoxy, it would afford us real pleasure to find him casting off entirely this novel opinion of the *actual transgression* of new-born infants. Most of those—we did think all—who hold this doctrine, deny altogether the existence of latent sin, consisting merely in disposition, and maintain that all sin consists in *voluntary action*; but as Dr. Woods rejects and confutes this doctrine, his system has no need of this appendage: it is in fact only an incumbrance to it. To us it appears to be as inconvenient to the consistency of the system, as a fifth wheel would be to a wagon; and we are persuaded, that at present it is held by a very feeble tenure; more as the relic of a theory embraced in very early life, than from any present conviction of its importance or certain truth. We cannot help, therefore, again expressing the wish, that Dr. Woods would give us a new edition of his "Essay on Native Depravity," divested of this, to us, offensive feature; and we will promise to use what little influence we possess to give it extensive circulation.

ART. III.—*Bible Natural History; or a Description of the Animals, Plants, and Minerals, mentioned in the Sacred Scriptures, with copious references and explanations of Texts.* By FRANCIS A. EWING, M. D. Written for the American Sunday School Union. Philadelphia: 1835. pp. 396.

J. W. Alexander

THE connexion between natural history and theological science is not at first sight apparent. Yet without any fanciful association it may be made to appear, that no man can satisfy the claims of theology without some familiarity with

this branch of knowledge, and that sound exposition especially demands an acquaintance with the physical properties of the objects mentioned in the Bible. Some of the darkest texts have had no obscurity except from the ignorance of facts in this department. Some of the most startling objections urged by infidels lose all force, when the natural history of the subjects is cleared up. Some of the choicest beauties of sacred rhetoric lie involved in allusions to natural phenomena, unknown to the multitude. And even bright predictions, and binding precepts, and indispensable doctrines, may be conveyed in language unintelligible save to him who knows the facts which they presuppose.

The whole matter of archaeology has assumed a new importance, as the art of interpretation has acquired its due form. The classical scholar finds his research into antiquities the clew to an otherwise disheartening labyrinth. He can make no progress among the inextricable windings of ancient history or song, until he has projected himself, by a regulated imagination, into the very site and scenes of those who wrote. The obscure rhapsodies and quick transitions of Pindar, for example, are but a beautiful, ever-varying cloud, until by an effort of mind he conjures about him the games of Greece, the concourse, the combat, the vaunting competitors, the national clamours, the ensigns, the wreaths, the paroxysm of triumph. To accomplish this, to make this mental effort, to attain this seeming transfer of identity, there is wanting such a knowledge of the history, the geography, the natural objects, the ensemble of the scene, as shall make him for the time a Greek in Greece, or a Roman in Italy. As aids in this, antiquaries have digested the results of their inquiries, reading, and travel, and this fund of knowledge is daily increasing. We have not only descriptions and summaries, but charts, maps, pictures, and models. Every hour the debt of the recluse student to the antiquary is becoming greater.

Biblical archaeology is on the very same grounds established as an essential part of the scholar's furniture. A more delightful subject can scarcely be laid before the youthful mind. How dry, how cold, how spiritless, yea, how utterly unmeaning, are many transcendent passages of the Bible, to one who is in this respect unprepared and rude. And how does the prospect brighten, when this enchantment peoples the waste and spreads verdure over

the blank desolation. Some of the chapters in the beginning of Joshua are to the uninitiated little more than lists of hard words; perhaps are skipped by many a devout reader. But let this reader be only prepared by a little geographical or topographical knowledge, and associations the most pleasing and vivid cluster around the very names. In process of time, the biblical scholar cannot cast his eye upon the sacred maps which decorate his walls without a glow of interest. The *Great Sea* is to his fervent spirit more, far more than the *Mediterranean*. *Gennesaret*, though less, and peradventure less beautiful, than some of our own beloved lakes, becomes a centre of hallowed recollections. Its encircling mountains were honoured of God. Its waves were trodden by the feet of Christ. Its very products were the sustenance of his disciples, the occasion of his miracles. Its beach was his place of divine discourse. Its overhanging eminences and solitudes were his holy resorts. Its surrounding hamlets were signalized by his converse, example, and mercies. And what shall we say of the stream which traverses the land, or of the acrid sea into which it falls; of the mountain chains at the north, the deserts at the south, the fresh champaign of the eastern nomades; the hill-country of Judah, the valley of Aijalon; of Ebal, of Gerizim, of Bethlehem, of Olivet, of Zion?

Nor is it in a merely aesthetic view, that we prize geography. We could show, that the very sense of innumerable passages lies closed under the seal of geographical lore.

What has been said of one branch of sacred antiquities may be said of all. They are all indispensable for the right understanding of the scriptures. The biblical student, whether clerical or laic, must be informed of all those things in which the ancient differed from the recent world. He must forget, over his Bible, these modern artificial phases of society; these western skies and fields and products; these utilitarian and commercial modes of life; these buckram and succinct dresses; these thousand fruits of exuberant civilization and capricious fashion; and closing his eyes on what is present and near, feel himself beneath a torrid heaven, among the vine, the olive, and the palm; conversing with the fervid, uncalculating Oriental, and surrounded by the complete panorama of the ancient East.

We could wish to say more fully what our judgment is respecting the study of natural history, even as unconnect-

ed with interpretation. But, at present, we are concerned with the subject in its latter aspect. No one can turn over the pages of the volume before us, without seeing at a glance that it is a very important help to the understanding of the English Bible. Indeed we wonder how readers have done so long without it, and marvel at the incurious minds of Bible-students. Teachers of the Scripture, whether ministers or Sunday-school instructors, cannot explain any book of the sacred volume without some knowledge of natural history in its scriptural connexions. To get this knowledge has not heretofore been easy. The ponderous tome of Bochart, treasure-house though it be for every modern plagiary, is a dark book even to some of the learned. Its Hebrew and Arabic and Persian paragraphs are any thing but instructive. Its volume is alarmingly great, its crudities are evident even to admirers, and, more than all, few can get access to it. To the common reader it is of course a clasped book. Modern epitomes and abridgments, while they have had the new lights of science and discovery, have not been accessible to Americans, or are not adapted to ordinary students, or are too costly for family use. The learned work of Dr. Harris is an honour to American scholarship, science, and industry, but it suits the interpreter better than the humble scholar. Its rich stores have been liberally extracted, and variously disguised, and in more than one noted instance, presented, with ambiguous acknowledgment, to English and to American readers. There are voluminous collections, such as Rosenmueller's and Jahn's, in which the natural history of the Bible has been treated of, among other allied subjects; and many foreign treatises; but these we cannot presume our countrymen to have used. We may therefore say freely, that Dr. Ewing has presented a work, which is, in its plan a desideratum; and which, if its execution shall be found approaching its promise, is a precious gift to American Sunday-schools. It is compendious and brief. Its plan is alphabetical, and the arrangement is made in the highest degree to conduce to easy reference, by clearness of method and typographical neatness.

We might take any ten pages of this unpretending volume, and find in them abundant evidence of the light which is cast upon the sacred scriptures from the fields of natural history. Two or three instances must suffice, in our present want of space, and the first text which we adduce is

Jer. ii. 22. "For though thou wash thee with *nitre*, and take thee much soap, yet thine iniquity is marked before me, saith the Lord God."—Although any intelligent reader may gather from the context, and especially from the mention of *soap*, that this *nitre* was a purifying agent, yet his conception must needs be vague, until he learns such particulars as the following.

"The *nitre* of the ancients, or *natron*, is entirely different from what is now called *nitre*, or *saltpetre*; it is the *soda* of commerce. It is found on the bottom and shores of certain lakes containing salt water, in Egypt and other eastern countries. When thus procured, mixed more or less with the soil, it is called *soap-earth*, from its cleansing properties. Another mode of obtaining it, common in Spain and the coasts of the Levant, is by burning certain plants, as *salt-wort* and *samphire*, which, growing in the salt atmosphere of the sea, contain much of this substance. The *soda*, or *barilla*, is found in the ashes, in the form of a hard, dry, heavy mass.

"*Soda*, like the other alkalies, has the property of uniting with all greasy substances, and so is very useful for cleansing. But by itself it is rather corrosive; it is therefore combined with oil, and thus forms *soap*.

"The Jews were acquainted with the uses of *soda* for taking stains and grease out of garments, and for cleansing the skin; but it is probable they used it more in the form of a ley, by pouring water upon the ashes of the plants, or by dissolving the earthy *soda* in water. Both kinds seem to be alluded to in Jer. ii. 22: 'Though thou wash thee with *nitre*, and take thee much soap, yet thine iniquity is marked before me, saith the Lord God;' that is, no external means can remove sin, or conceal it from the eye of God.

"The art of cleansing woollen by means of *soap*, or fullers' earth, is called *fulling*: it is alluded to in the account of our Saviour's transfiguration. Mark ix. 3.

"When *vinegar* is poured upon *soda*, the latter is decomposed, and, according to a chemical law, one of the ingredients of it forms a new compound with the *vinegar*, while the other escapes in the form of numerous bubbles, with a quick crackling noise. To this Solomon compares the effect of ill-timed merriment upon one that is in trouble, 'as *vinegar* upon *nitre*, (*soda*) so is he that singeth songs to an heavy heart.' Prov. xxv. 20."

So also several passages in which the *moth* is named, are rather obscure. Of these Dr. Ewing gives us the following satisfactory explanation.

"**МОТН.** (Matt. vi. 19.) This is the name of a large variety of insects, having four wings covered with fine dust or down, like those of butterflies. From these they are distinguished by their *antennae*, which are thread-like and pointed, or sometimes fringed; while those of butterflies end in a knob; by their colour being not so beautifully variegated; by the position of their wings at rest being nearly flat instead of upright; and by their flying mostly by night. They are produced from eggs, and pass through three usual states of the worm or caterpillar, chrysalis, and the perfect winged insect; in the first they are very troublesome and destructive. The different kinds seek different substances in which to deposit

their eggs; some of them always fixing upon furs, woollen cloths, silk, and other materials of raiment. These, called clothes-moths, are very small, and make their way through the smallest hole, so that it is often difficult to preserve garments from their attacks. From an egg thus placed in a proper situation, a small silvery caterpillar comes forth and immediately begins to make itself a covering, by cutting off the fine threads of the cloth, laying and binding them together around its body until a case is formed large enough to turn in, and open at the ends. When its case is finished, it proceeds to feed on the cloth within its reach. As it increases in size it enlarges its building both in length and thickness, in a very curious manner.

“Of this kind is the moth mentioned in the Bible, commonly with reference to the mischief it does to garments. The effect of God’s judgments upon men is compared to it. ‘When thou with rebukes dost correct man for his iniquity, thou makest his beauty to consume away like a moth.’ Ps. xxxix. 11. ‘Therefore will I be unto Ephraim as a moth, and to the house of Judah as rottenness.’ Hos. v. 12. The state of an old garment eaten through and destroyed, is used to represent the feebleness of man, ‘crushed before the moth,’ (Job iv. 19,) and his ruined condition on account of sin; ‘he like a rotten thing consumeth, as a garment that is moth-eaten.’ Job xiii. 28. ‘The moth shall eat them up as a garment, and the worm shall eat them like wool.’ Isa. l. 9; li. 8.

“Job says of the wicked man, ‘he buildeth his house as the moth,’ (xxvii. 18;) that is, as weak and easily destroyed.”

The use of *hyssop* is thus presented, so as to clear several places which would baffle an unobserving reader.

“Among the Hebrews, hyssop was commonly used in purifications as a sprinkler, for which it was well fitted by its bushy growth. When the people were about to leave Egypt, they were directed to dip a bunch of hyssop in the blood of the paschal lamb, and strike against the door-posts of every house, which was a sign for the destroying angel to pass over. Ex. xii. 22. It was used also in cleansing the leper, and the house in which leprosy had been, (Lev. xiv. 6, 51;) and in preparing and sprinkling the water of separation, (Num. xix. 6, 18;) and probably in all other sprinklings, as intimated by the apostle, (Heb. ix. 19;) and devoutly referred to by David, ‘Purge me with hyssop, and I shall be clean.’ Ps. li. 7.

“When our Saviour was on the cross, just before he expired, a sponge filled with vinegar was put on a reed and held to his mouth. Matt. xxvii. 48; Mark xv. 36. According to John xix. 29, it was put upon hyssop. Either the sponge was placed on a long stalk or reed of hyssop and thus held up, or it was joined with hyssop and then put on a reed. The first seems to agree best with the text, for in both places the Greek word means ‘placed round,’ just as one would tie a sponge round a stick; and a stalk of hyssop would be quite long enough to reach the mouth of a person on a cross, which was not so high as is commonly supposed. Either way, however, there is no contradiction in the two statements.”

And even so familiar an object as the dog, is placed in a new light, so as to aid our interpretations, by this statement.

“According to the Mosaic laws, dogs were unclean, and flesh which had been torn by beasts was directed to be thrown to them. Ex. xxii. 31.

Wherever the name dog occurs in the Bible, applied to any person, it is a term of the utmost contempt and reproach. It was so used in Deut. xxiii. 18; by Goliath, (1 Sam. xvii. 43;) by David, (1 Sam. xxiv. 14;) by Mephibosheth, (2 Sam. ix. 8;) by Hazael, (2 Kings viii. 13;) see also Phil. iii. 2. Rev. xxii. 15. At the present day a Turk expresses his hatred and contempt towards a Christian by calling him dog. Unfaithful and wicked ministers are called 'dumb dogs,' and 'greedy dogs,' (Isa. lvi. 10, 11;) because, while indulging their own selfish desires, they pay no regard to those whom they are appointed to watch and guard. Solomon says, 'He that meddleth with strife belonging not to him, is like one that taketh a dog by the ears,' (Prov. xxvi. 17;) that is, needlessly exposes himself to danger. Again, 'As a dog returneth to his vomit, so a fool returneth to his folly,' Prov. xxvi. 11. This allusion to a very common habit of the animal is also used by Peter, to represent the condition of those who, after professing repentance, turned back to their sins. 2 Pet. ii. 22. The instruction of our Lord, 'give not that which is holy to the dogs, lest they turn again and rend you,' (Matt. vii. 6,) was probably intended to teach prudence in speaking of holy things before those whose wicked passions might be roused to do injury. In the conversation between our Lord and the Syro-phoenician woman, (Matt. xv. 27; Mark vii. 27,) he speaks of the Gentiles as dogs, to whom the children's bread was not to be given. This was a great trial of her faith, for she herself was one of them. But she still humbly persisted, and at last her petition was granted: thus affording an encouraging example to all who are earnestly seeking the favour of the Lord."

These extracts are made almost at random, and do not serve in any degree to characterize the work. This it would be unfair to attempt by the method of citation; for the condensation of matter being great, a false impression of its comprehensiveness could not fail to be made, by insulated fragments. It is no small acquisition to a Bible reader, to have in a portable volume the quintessence of all that has been written on this topic. Omissions and errors there doubtless are, though after a careful search we have discerned but a few; so that there may be predicated of the work all the completeness which is compatible with brevity. We regard it for our own reference as being at once lexicon and concordance, and for these ends scarcely inferior to the best books on the subject, such as the *Biblisches Naturgeschichte* of Rosenmueller. At the same time, it is plainly written with reference to the wants of the young and uninstructed; being every where perspicuous, abounding in familiar illustration, and in all respects flowing and popular. These points are gained, and the merit of this is not small, without infringing upon technical accuracy, or becoming superficial and empty, as is the case with too many religious manuals. While the book is full, so that scarcely any item is omitted in the register, and no

one treated in a perfunctory manner, it is free from those prickles of barbarous terminology which are apt to grow out of scientific labour; and which we are sure the author must have tasked himself to shun. For the details, where most simple, evince a close acquaintance even with the more recondite branches of physics. This appears every where, and such being the fact, it is evident that the store of matter before his mind, would have enabled the writer to prepare, with perhaps less cost of thought, a larger and more ambitious work. To become level to the common mind is not the attainment of an hour.

The reader may confidently look to the book for copious explanations of a thousand figurative allusions with which the Bible abounds, and which give all the colours to many of the richest prophetic paintings. It would detain us, and be out of place, even to decimate the striking passages which might be selected in proof of this. Where scriptural texts are explained, this is done, for the most part, with caution, modesty, and research, and often very happily. The book is singularly free from paradox and unseasonable novelty. And we cannot but state as a very great excellence, that with all the studied conciseness of the writer, he has found space for a gentle insinuation of evangelical truth, in agreeable association with important facts; so that we are not sure that a little body of saving doctrine might not be digested from these pages. There is one characteristic of this dictionary, to which we would invite, in a special manner, the notice of teachers. It is the introduction of numerous and pertinent references to Scripture texts. These are arranged with surprising care, and so as to give each gem a new value from its appropriate setting. Nothing in the volume has more gratified us than the art of the writer in this particular. To discover the full import of what we mean, every passage, thus referred to, should be sought out in the Scriptures, and carefully read in its connexion. The size of the manual would be doubled, if every such text were added at large.

The wood-cuts which adorn the book greatly enhance its value. They strike us as much superior to anything which has issued from the Sunday School presses. And they are not servile copies from previous publications, but in a number of cases have been the fruit of the author's own taste and art.

The alphabetical arrangement has sometimes been ob-

jected to, in works of this kind. With us it has great merit, and we are willing, in a manual for constant handling, to sacrifice every peculiar advantage of continuity, for the ease of reference, which the arrangement here adopted secures. At the same time, it must be conceded, that this method renders necessary, what we should be pleased to see prefixed to any future edition of the "Bible Natural History," a synopsis of the articles, according to some scientific method, so that the work might be used, not simply for reference, but in systematic study.

In a work of this description, it is always difficult to draw the line precisely between facts which are indispensable to exposition, and those which, however interesting, illustrate nothing in the Bible. For instance, the sole use of the cormorant and the bittern is to denote solitude, and therefore a word or two concerning these animals might, in a severe scrutiny, be deemed sufficient; yet the information given by our author is so valuable, and is so agreeably communicated, that our remark is intended to have the aspect rather of praise than blame. In many cases, the philosophical correction of vulgar errors, by the light of modern discoveries, though incidentally brought in, is satisfactory in a high degree, and indicates a well-furnished mind. See the articles *Dew, Ant, Ostrich, Salt, Spider, Bud, Birds, Locust, Bee.*

A few cases may be noted where the English version has not been duly corrected. One of these is the article under the title *Dragon*. This word is employed in our Bibles indiscriminately, for the translation of two Hebrew words which are entirely distinct, though of like sound, viz. TANNIN, and TANNIM, the plural of TAN. The former signifies sometimes a *serpent*, (Ex. vii. 9. Deut. xxxii. 33. Ps. xci. 13.) but generally a large marine animal; and, indeed, it is translated *whale* in Genesis i. 21, and Job vii. 12, but elsewhere *dragon*. Isaiah xxvii. 1, &c. TAN, on the other hand, means some creature inhabiting the wilderness, and is therefore used in connexion with owls and other solitary animals, to indicate desolation. Thus, in one of the most affecting pictures of Hebrew poetry, Isaiah xxxiv. 13: "And thorns shall come up in her palaces, nettles and brambles in the fortresses thereof, and it shall be a habitation of dragons, *tannim*, and a court for owls; the wild beasts of the desert shall also meet with [*Ijim*] the wild beasts of the island, and the satyr shall cry to his fellow; the screech-owl also shall rest there, and find for herself a place of rest. There shall the great owl make

her nest, and lay, and hatch, and gather under her shadow; there shall the vultures also be gathered, every one with her mate." See, likewise, Isaiah xiii. 22; xliii. 20; Malachi i. 3. Hence, also, the phrases "place of dragons," Ps. xlv. 19; "den of dragons," Jer. ix. 11; meaning solitude: "brother to dragons," Job xxx. 29; meaning solitary, desolate. This animal is described as uttering a wailing cry, Mic. i. 8; and as giving suck, Lam. iv. 3. These two animals, thus distinct in character and habits, and in their Hebrew names, are, in our version, confounded under a name which is worse than unmeaning. For the word *dragon* undoubtedly comes over many simple minds with associations of a fabulous kind. There are other terms, in the incomparable translation we inherit, which are open to the same objection. They invest the passages in which they occur with the garb of mythology, and throw a shadow over the authenticity of holy oracles. Such are the words *satyr*, *cockatrice*, &c.

The author, in another instance, has fallen into a very natural error, where, under the title *Kite*, he treats *Ijim* translated "wild beasts of the islands," as the plural of *Ayyah*, the *Kite*. Dr. Harris makes the same mistake, in his *Natural History of the Bible*, p. 240, where he also rejects the opinion that the *Ijim* are jackals, though the latter is very plausibly supported by Bochart, Gesenius, and Rosenmueller. The last of these critics has a long, erudite, and entertaining chapter upon this head.

The *unicorn*, so long a stumbling stone to scriptural students, is regarded by Dr. Ewing as an animal nowhere existing at this day; and he inclines to render the original either by the *rhinoceros* or the *buffalo*. The latter would seem to be the conclusion of Gesenius, who herein follows Albert Schultens and De Wette. If, however, we may credit modern travellers, there has been found in the deserts of Tibet a creature answering in some degree to the one-horned monster of the ancients. See *London Quarterly Review*, No. XLVII. and Rosenmueller's *alt. und n. Morganland*, vol. ii. p. 269.

And since we have named one work of this celebrated interpreter, we must add a word concerning another, perhaps the most valuable of his wonderfully numerous literary progeny, to wit, his *Manual of Biblical Archaeology*. This great work, of which the fourth volume, in more than eight hundred pages, treats of the specific subject of our article, has been issuing, at intervals, from the Leipsick press, since

1823. It is the most complete treasury which we have in this department. The *text* is adapted to the wants of common readers, and is pleasant reading for any intelligent person. The *margin* contains philological, critical, and scientific notes. The various Semitic dialects, in which the author is universally known to be proficient, are here found to yield elucidation to the original passages; and great use is made of the books of Travels in the East, which have been so multiplied since the beginning of the present century. Both in geography and natural history this collection surpasses all which have preceded it. A translation of its prolegomenon may be found in our volume for 1828, p. 447, but it is as yet too little known in America.

In the way of fault-finding, however, there is little opening for the critical art in Dr. Ewing's modest and satisfactory volume. We could, indeed, wish it were larger, and we are sure many readers, and, perhaps, also the writer himself, unite in the same desire. For we are aware how impossible it is, within limits so strait, to do justice to one's subject or conceptions. And therefore we should rejoice to welcome from the same hand, and for a different class of readers, a copious treatise on the same branch of archaeology, with a more liberal introduction of such matters as would be too scientific or abstruse for the common reader. Even in a manual, such as this, we should think it an advantage to have on several points, especially in the mineralogical and botanical branches, a more copious explanation of such things as are susceptible of it from modern science. As, for example, the identity of carbon and the *diamond*, might be added; or the distinction of the two substances, known by the common name of *alabaster*; or the etymology of the *amethyst*; and, indeed, we could not object to the introduction, in the margin at least, of all the botanical names of plants, or any similar aids from scientific terminology. As it is, we hope the present work will remain unchanged in substantial. And if parents wisely regard the advancement of their families, they will hasten to afford this, and all similar helps to their children. It is time that the Bible were made our great classic. It is time that youth, pursuing liberal studies, were enlightened to see that every noble science, every intellectual attainment has its point of natural connexion with the system of divine truth. Theological students have long needed such a manual as this.

Until something better appears, we cordially recommend it to them, believing that they have learned not to overlook valuable instruction, even though ostensibly dedicated to the humble Sunday-school child.

Before we leave the subject of this article, we must take occasion to add something upon an allied theme, if indeed it is not another aspect of the same. The study of natural history, whether in general, or as it is narrowed down to the objects named in the Scriptures, merits the special consideration of every serious mind. To pass by its ample fund of entertainment to the mere physical inquirer, and its near relation to all other science, it has intimate connexion with natural theology, as is apparent from every work where an induction is made of instances to prove the being and perfections of God. It is a branch of knowledge which cannot be adequately investigated, without a constant reference to the doctrine of final causes, or in other words, to the proofs of benevolent design in the creation. Since we grant that the undevout astronomer is mad, we cannot deny that the naturalist, who loses sight of God in those of his works which are thrown under our closer observation, is a monster or a fool. It has struck us as being a most remarkable attestation to the validity and pertinence of such argument, that it is employed on most solemn occasions by Jehovah himself. To take a single instance from one of the oldest sacred relics. When God, offended by the perverseness of Job's friends, and about to humble the patriarch himself, addresses him from the whirlwind—what considerations does he present? Those, we answer, almost without exception, which are gathered from the realm of nature. The 38th, 39th, 40th and 41st chapters of Job may be called so many chapters of inspired natural theology. From the awful recesses of his veiled glory, the Almighty declares his majesty and glory, by sublime references to his power in creation. Mark how he accumulates argument on argument, from nature, and especially from natural history, how he points, in abasing interrogations, to the earth, the stars, the ocean, to all the phenomena of meteorology, to the tribes of lower creatures, the wild goats of the rock, the wild ass, the peacock, the ostrich, the hawk, the eagle; to the horse whose neck is clothed with thunder, to behemoth and leviathan. And mark how the prostrate sinner cries, under the due impression of the argument, "I know that thou canst do every thing, and that no thought can be withholden from thee.

Who is he that hideth counsel without knowledge? therefore have I uttered that I understood not; things too wonderful for me, which I knew not."

We are authorized to extend the argument to the goodness, no less than to the power of God; goodness, which strikes us at every opening of our eyes upon nature, and most of all in living creatures. There has probably never been a student of Paley's works, who has not felt something like personal affection for the man, mingling with admiration of the philosopher, in reading his incomparably beautiful chapter on the "Goodness of the Deity." It is all delightful and edifying, fruitful of holy musing, but one passage we cannot but insert, for it opens windows of joy upon the world in which we make our pilgrimage. "It is," says this good man "a happy world after all. The air, the earth, the water, teem with delighted existence. In a spring noon, or a summer evening, on whichever side I turn my eyes, myriads of happy beings crowd upon my view. 'The insect youth are on the wing.' Swarms of new-born flies are trying their pinions in the air. Their sportive motions, their wanton mazes, their gratuitous activity, their continual change of place without use or purpose, testify their joy, and the exultation which they feel in their lately discovered faculties. A bee among the flowers in spring is one of the most cheerful objects that can be looked upon. Its life appears to be all enjoyment; so busy and so pleased: yet it is only a specimen of insect life, with which, by reason of the animal being half domesticated, we happen to be better acquainted than we are with that of others. The whole winged insect tribe, it is probable, are equally intent upon their proper enjoyments, and under every variety of constitution, gratified, and perhaps equally gratified, by the offices which the author of their nature has assigned to them. But the atmosphere is not the only scene of enjoyment for the insect race. Plants are covered with aphides, greedily sucking their juices, and constantly it should seem, in the act of sucking. It cannot be doubted but that this is a state of gratification. What else should fix them so close to the operation, and so long? Other species are running about, with an alacrity in their motions, which carries with it every mark of pleasure. Large patches of ground are sometimes half covered with these brisk and sprightly creatures. If we look to what the waters produce, shoals of the fry of fish frequent the margins of rivers, of lakes, and of the sea itself. These are so happy,

that they know not what to do with themselves. Their attitudes, their vivacity, their leaps out of the water, their frolics in it, (which I have noticed a thousand times, with equal attention and amusement,) all conduce to show their excess of spirits, and are simply the effects of that excess. Walking by the sea-side in a calm evening, upon a sandy shore, and with an ebbing tide, I have frequently remarked the appearance of a dark cloud, or rather, very thick mist, hanging over the edge of the water, to the height, perhaps, of a yard, and of the breadth of two or three yards, stretching along the coast as far as the eye can reach, and always retiring with the water. When this cloud came to be examined, it proved to be nothing else than so much space filled with young shrimps, in the act of bounding into the air from the shallow margin of the water, or from the wet sand. If any motion of a mute animal could express delight, it was this; if they had meant to make signs of their happiness, they could not have done it more intelligibly. Suppose, then, what I have no doubt of, each individual of this number to be in a state of positive enjoyment, what a sum, collectively, of gratification and pleasure have we here before our view!"

And, we may subjoin, what a sum of gratification and pleasure is here offered to the christian student of natural theology. There are some who are ignorant of the instructive books of Derham, Ray, Boyle, and Nieuwentyt, who may be directed to such inquiries as these by the more potent name of Brougham; and we trust the noble work of this great statesman and philosopher will lead the way for new inquiries into this large domain. For it is as true as when it was written by Galen, "Many neglect such works of nature, admiring only those spectacles which are novel or surprising."*

In colleges, schools, and families, youth ought to be disciplined to seek everywhere for the traces of the divine hand. They may thus be furnished with cheering contemplations in every excursion, and thousands of memorials to bring the great object of supreme love before their minds. The rising race may thus be armed against the insinuations of atheism, and bred, even from tender years in those methods of devout meditation which shall make all nature

* See the whole passage concerning the author's experiment with a kid which had never seen its dam.—*Galen. de locis affectis*. vi. c. 6.

a temple of Jehovah, hung round with trophies of his power, and pledges of his beneficence, at once great and beautiful; so that in every prospect, animal, insect, or mite, they may find cause delightfully to exclaim, "*How manifold are thy works, O Lord! in wisdom hast thou made them all.*"

ART. IV.—1. *A Discourse on the Apostolic Office, delivered in St. John's Church, in the city of Providence, and State of Rhode Island, November 13th, 1833, on occasion of the ordination of the Rev. James C. Richmond.* By ALEXANDER V. GRISWOLD, Bishop of the Eastern Diocess. 12mo. pp. 12. Philadelphia, 1835.

2. *Answer to a Review of "Episcopacy tested by Scripture," in the Biblical Repertory for April 1835.* [An article signed H. U. O. in the *Protestant Episcopalian*, for July.]

J. Addison Alexander
 It is no safe thing to meddle with our ancient friends the prelatists, since their last discovery. As might have been expected from its magnitude and value, they have grown exceeding techy with respect to the treatment of their great arcanum by the uninitiated. They seem to imagine, like the alchemists of old, that the whole world is waiting in suspense for the result of their experiments; holding its breath till the universal menstruum or elixir is discovered. No one is allowed either to feel or feign indifference. And even when the mystery is divulged, what can we do? If we let it alone, we are enrolled as converts; if we handle it at all, it is always too roughly. High church episcopacy is indeed, botanically speaking, a most tender herb, liable not only to be crushed by the broad foot of vulgar 'non-conformity,' but also to be blasted by the merest breath of argument. It cannot bear the east wind of discussion, but must have an atmosphere created for it, like a rare plant in a hot-house, to be looked at, but not touched. To this discreet arrangement we have no objection; but are heartily content to stand at any distance not entirely out of sight, craving no other privilege than that of furnishing a brief description, now and then, for the gratification of the 'less informed.' This latter phrase appears to have puzzled Bishop Onderdonk immensely, in consequence of an amiable error of his own. We are sorry to inform him that our Presbyterian readers are by no means so enlightened as he