BIBLIOGRAPHIC NOTICES.

The Physical Diagnosis of Diseases of the Lungs. By WALTER HAYLE WALSH, M. D., &c.

Two manuals of physical diagnosis have been recently noticed in this Journal. The present work belongs to the same class, but is differently arranged, and though adapted, as we are informed in the preface, for beginners, is by no means unworthy of the attention of the experienced stethoscopist.

The merit of the book is of a practical kind (its literary faults we shall have to notice presently), and the remarks which are the result of the author's own observation or reflection, are uniformly valuable and judicious, and prove Dr. Walshe to be a master in the art of physical diagnosis. A few instances of his manner of discussing practical questions may not be unacceptable to our readers.

On the measurement of the chest in phthisis he remarks :

“There appears to be no point more distinctly proved by observation, although questioned by some, than that depression of the infra-clavicular, post-clavicular, and upper scapular regions attends many cases of phthisis. At what period of the disease, and by what process is this depression effected? Laennec, who first drew attention to the point, referred the depression to evacuation of the contents of cavities, and to the subsequent contraction, and so called cicatrization. Subsequently Dr. Stokes shewed that depression might set in at a much earlier period, in fact, ‘without the formation of any cavity whatever,’ and referred it to the atrophy of the pulmonary substance which attends the progress of tuberculization. More recently still M. Fournet has fixed yet earlier the possible period of development of depression, namely, before softening has occurred. In such cases he has invariably found, that the apex of the lung, besides containing tubercle in abundance, was invested with thick and dense false membrane; and to the contraction of the plastic matter forming this membrane, he ascribes the chief influence in causing depression of the corresponding surface. From his observations it would appear, that the amount of depression was always directly as the age and

density of the plastic matter ; and these latter directly as the quantity of tubercle accumulated in the lung. He admits also, that the formation of cavities greatly increases the amount of depression. I am enabled, from my own experience, to confirm the statement of M. Fournet respecting the period at which depression *may* be visible, and likewise his notions on the importance of false membranes in producing it. Respecting the regular proportions he describes between the false membrane, the tubercle, and the change of shape, I must confess myself unable to speak, and I believe that both atrophy of the lung, and contraction of plastic matter exuded into its substance (to which no one appears to have referred) have their influence in producing the depression. Nevertheless it is true that I have not seen notable depression (exclusive of cases of cavity), unless when there was pleural false membrane in considerable quantity present.

"In a conversation upon this subject which I recently had with Dr. Chambers, I learned, that he has made the interesting observation that an *enlargement* in the antero-posterior diameter of the summit of the chest (and consequently I presume some amount of visible bulging) is discoverable in the early stage of some cases of phthisis ; *a priori* considerations argue strongly in support of the accuracy of this observation. Enlarged size of the part implicated must in fact be the *first* result of the morbid accumulations at the apex (both tuberculous and simply plastic), but it is on similar grounds fair to suppose, that the enlargement must be of very short duration—a circumstance which would plausibly explain its not having hitherto attracted attention. It seems probable (but upon this point I do not know Dr. Chamber's experience) that acute cases, and those in which emphysema co-exists, are those in which it will most commonly be detected."

The following remarks on some opinions of Dr. Stokes first put forward in this Journal are worthy of attention :

"The state of the intercostal spaces in parts which have undergone expansion or bulging has been made a subject of interest by the observations of Dr. Stokes. He maintains, that in emphysema 'even after great dilatation of the chest has occurred, we see the intercostal spaces, so far from being obliterated, *deeply marked*,' and that the single malady in which this obliteration really occurs is pleurisy in its advanced stages. The conditions directly conducive to its production are *paralysis* of the intercostal muscles and excentric pressure, one being as essential as the other : this paralysis is presumed to be the result of inflammation extending to the muscular tissue. For the same reason the intercostal spaces will not be obliterated in cases of simple hydrothorax, nor in *all* instances of pleuritic effusion, because muscular inflammation and paralysis do not exist at all in the former, and are not *necessarily* present in the latter.

"The question here started is strictly one of observation, and it must be confessed, that the experience of physicians generally does not accord with that of Dr. Stokes, in respect of the bulging in em-

physema. MM. Louis and Woillez (not to mention others who have paid less special attention to the form of the chest in emphysema), are wholly opposed to Dr. Stokes on this point. Both maintain that the intercostal hollows are in this affection either effaced or manifestly less marked than in the natural state, and even point out this implication of the muscular plane of these spaces as one of the distinctive marks of emphysematous as compared with rachitic, or physiological heteromorphism.

“Having been for some years acquainted with the difference of opinion now exposed, I have made the point a subject of inquiry, and have satisfied myself that in emphysema the conditions in respect of bulging are of three distinct kinds. *First*.—There may be no expansion at all, general or local. *Secondly*.—There may be bulging of the surface generally, with a natural state of the intercostal spaces. And *thirdly*.—There may be bulging with distinct obliteration of the intercostal spaces. The key to these apparent contradictions lies mainly in the anatomy of the disease; in its anatomical varieties which have in this point of view escaped the consideration of the observers referred to.

“In the *first case* I have found the disease, which, in respect of symptoms, may have been very intensely marked of the *atrophous* kind; here the physical cause of expansion was altogether wanting. The *second variety* of heteromorphism I have never observed in the infra-clavicular region (when alteration of shape was limited to that region, one of the special seats of such change in emphysema), but have met with it elsewhere in certain cases of almost globular expansion of the thorax in emaciated emphysematous subjects. But in these instances (and doubtless they exist more frequently than they are discovered or suspected), the local heteromorphism (when characterized in the manner now referred to), was in all probability, especially when occurring at the back, physiological, and wholly *independent of the emphysema*. *Thirdly*, when bulging has existed in regions where observation proves it to appertain specially to emphysema, e. g. the infra-clavicular, I have found the intercostal spaces distinctly obliterated, and the disease, if opportunity for post-mortem inquiry presented itself, of the *hypertrophous* kind.

“The difference of opinion, under consideration, appears to be very readily explicable in the manner now proposed. What I have stated, I believe to be in strict conformity with observation, whereas I am not aware that Dr. Stokes’s theory of inflammation of the intercostal muscles being a necessary condition of their excentric displacement, rests upon any observed cases submitted to anatomical examination. It is not easy to understand in his theory why the intercostal muscles should resist excentric pressure more powerfully than the ribs; and this, be it noted, equally in subjects of every degree of muscular weakness or vigour. It appears to me that there will always be more or less hollow in the intercostal spaces, as has been shewn by M. Woillez, so long as the elasticity or concentric force of the lung is not destroyed;

that as soon as this change has taken place, as for example, from the progress of hypertrophous emphysema, pressure sets in and influences the position of the intercostal muscles, at least, as readily as that of the ribs."

We shall only cite one more example, from his examination of the theory of the crepitant ronchus; after reviewing the different observations on the subject, of different writers, he concludes:

"It appears inferrible from what has now been said, that the theories of the mechanism of the crepitant ronchus hitherto proposed, cannot be considered satisfactory; it is unfortunately easier to make this manifest, than to substitute a less objectionable one in their room. It seems to me most probable that first the phenomenon occurs in the parenchyma of the lung itself, especially in those portions of it immediately contiguous to, and actually forming the walls of the ultimate terminations of the bronchi; whether these terminations be globular sacs open at one point of their periphery only, or otherwise constituted. Secondly, that its physical cause is the sudden and forcible expansion of that parenchyma, glued together, as it were, by the viscid exudation with which it is infiltrated. Each single crepitus, or click, would thus signify the expansion of the cell, and be produced by the unfolding of surrounding glutinous tissue necessary for that expansion. Thus conceived, as respects its mechanism, the chief phenomena of the crepitant ronchus become perfectly intelligible; its dryness and sharpness, the sensation of minute size attending the sounds of which it is composed; the similarity to the sound of minute ruptures of tissue, and the total absence of the bubbling character; its occasionally accompanying the entire inspiratory act, and sometimes appearing only at its close, according as the infiltration of viscid lymph more or less completely prevents expansion of the vesicles. We can on this supposition also, readily understand why crepitation should exist in inspiration only; though the rapid and abrupt unfolding of the glutinous mass be productive of crackling noise, it is very unlikely that the comparatively slow and equable restoration of the tissue to its previous collapsed state, would be thus productive; indeed the presumed physical cause of crepitus has ceased to exist. On the other hand, there is no reason why, in the ordinary theory, crepitation should not as regularly exist though not with the same *loudness* in expiration as in inspiration. The air is presumed, in inspiration, to have passed through a certain fluid; if so, it must re-pass through it during expiration, and assuredly, with a noise similar in kind, though less in degree. When ronchi are manifestly produced by the passage of air through liquid (e. g. mucous cavernous, &c.), they attend both inspiration and expiration."

For some further considerations confirmative of the views here taken, the reader may refer to § 97, and § 237.

The observations at § 237 is as follows:

"I have recently observed the following facts which appear to me worthy of notice, in respect of the subcrepitant ronchus more particularly, but also of the mechanism of ronchi generally. In a subject presenting the most evident signs, both in front and behind, of a cavity at the left apex, an extremely abundant subcrepitant ronchus, occurring almost in puffs and having the liquid character in a most marked manner, was day after day (during the week previous to death), detected in the entire height of the left side posteriorly. The ronchus was, however, distinctly more abundant and more liquid (as noted in writing during life), in the upper scapular, and upper part of the lower scapular regions, than elsewhere. As the patient was anasarctous to a high degree (the urine albuminous), and as he constantly lay upon the left side, the explanation of the subcrepitant ronchus naturally suggesting itself was that it depended on oedema of the pulmonary tissue generally, but most marked at the apex, and there of course, affecting the tissue between the cavity and the surface of the lung. At the post-mortem examination, however, I found this explanation inadmissible, for the thin lamella of tissue between the cavity and the surface, was as hard as cartilage, and contained not a particle of serosity, nor was the organ in any part distinctly infiltrated with fluid, being, on the contrary, particularly dry from the excessive induration. But all along the posterior surface of the pulmonary pleura, there appeared (in addition to ordinary dense pseudo-membrane), a quantity of fine adventitious cellular tissue, abundantly infiltrated with liquid; masses of some size were formed from place to place by the accumulation of fluid in the meshes of this cellular tissue, and it was observed by those present, (who had not seen the patient during life), that they were much larger, than elsewhere, at the apex; there was no air either in the cavity of the pleura, or intermixed with the serosity. Now, although it is possible to suggest another explanation, it seems most reasonable to suppose, under the circumstances, that the ronchus was actually produced in the masses of infiltrated tissue referred to, and, therefore, outside the lung and independently of air. If such were the fact, it would lend much indirect support to the theory already advanced in explanation of the true crepitant ronchus."

We think that such a theory is moreover strengthened by the cases in which the crepitant ronchus is modified, or prevented by extreme congestion; cases of pneumonia, as is well known, occur not unfrequently in which this sign becomes developed at once on the removal of this congestion by bleeding. It also accords with the phenomena observed in phthisis, many of which (as the crumpling or click sound present in most cases in the early stages of tubercle and the interrupted respiration of the same period) have their origin in all probability in deviations from the natural mode of expansion of the lung.

We have now quoted sufficiently to enable our readers to form their own opinion of the practical value of this work; we are dis-

posed to rate it very highly, and we think that we have met with no clearer, sounder, or safer exposition of the physical signs of pulmonary disease. But we just now *hinted* at a fault, upon which we must take leave to remonstrate with the author, as it arises out of a reference to a paper published in this Journal. That Dr. Walshe never read the paper referred to is evident, since he has completely misrepresented its meaning, and assigned (erroneously) to others the prior claim to the views contained in it, as we shall now very shortly shew. Dr. Walshe, page 178, says :

"It is conceivable that if the pulmonary tissue between the larger tubes and the anterior wall of the chest be consolidated, the sound of percussion will, in that situation, have the tubular character. Such is the case, as Dr. Williams was also the first to point out in certain cases of pneumonia. There can be little doubt, I may remark here, that the cases described by Drs. Hudson, Graves, and Stokes, as examples of pneumo-thorax complicating pneumonia, admit of an easy explanation by Dr. Williams's observation. The sign most dwelt upon by these physicians was a remarkable resonance on percussion ; but, as we have just seen, this may be otherwise and very simply accounted for. Besides, the evidence of pneumo-thorax is in other respects extremely defective (some of the cases of Dr. Hudson were rejected by Dr. Stokes), and there is strong motive for believing, that the frequency of simple pneumo-thorax has been much exaggerated," &c.

Of the literary merits of the above passage an opinion may be formed, by simply reading the following extracts from Dr. Hudson's papers in vol. vii. and vol. xi. of this Journal, and from Dr. Williams's published lectures.

At page 401 of vol. vii. Dr. Hudson says :

"I shall next advert to the remarkable phenomenon presented by Cases II. and VII. of *tympanitic clearness on percussion over a solidified lung, without air being present in the pleura*. In the 12th and 16th Numbers of the Dublin Journal, Dr. Graves has described two cases of pneumonia, accompanied with morbid clearness on percussion, which he explains by secretion of air from the inflamed pleura, and I observe that the learned Editor of the Medico-Chirurgical Review not only concurs in this explanation, but gives a case precisely similar to the one last related by Dr. Graves, adding, that 'dissection has not yet confirmed conjecture in any of these instances.' Having met with four cases in which the observation of this phenomenon was followed by dissection, I shall briefly relate them. . . . It seems to me very obvious, that these cases cannot be brought under the explanation given by the high authorities just quoted, and I confess myself quite unable to give one which would be considered more satisfactory. The existence itself of the phenomenon under the above circumstances will, I am sure, be questioned. . . . In some instances it has been accounted for by the transmission of the sound of the

stomach through the solid lung. I think this explanation will apply to three of my cases which occurred on the *left side*; the fourth will demand a different one, and it might, perhaps, be found in the facility with which *the vibrations of the air in the bronchus and its larger divisions might be supposed to be communicated through a lung in that condition, i. e. solid throughout, and, therefore, not permitting the loss in a mixed medium of solid and healthy lung of such vibration.* This is a mere conjecture which may be readily denied, and not easily confirmed; *but of the fact I am certain, that a sound, equal at times, in clearness, to that of pneumo-thorax, may be yielded by (or rather through) a solid lung under certain conditions."*

What these conditions are, further observation enabled Dr. Hudson to announce in the eleventh volume of this Journal; after detailing a conclusive case, in which the phenomenon had been detected on the *right* side during life, and a solidified lung and adherent pleuræ found after death, he proceeds to state:

"I regard it (the phenomenon of tympanitic clearness) as the necessary result of three conditions.

"1st. Elasticity and tension of the parietes.

"2nd. A homogeneous solid state of the lung.

"3rd. Air in the larger bronchial tubes.

"The importance of the first condition may be illustrated by a drum-head. That of the second is equally apparent; and the two are necessarily associated in some cases of pneumonia, occupying the lung in its *entire circumference*; for till then the tumefaction of the inflamed portion may take place at the expense of the uninflamed part; but when all becomes engaged it must be *outwards*, and a state of tension of the parietes is the consequence."

So far from any writer claiming a priority of observation of this phenomenon, after the publication of Dr. Hudson's first paper, his apprehension that its existence would be questioned was fully realized, since not only did Dr. Stokes repudiate the doctrine, and as Dr. Walshe expresses it, reject the cases, that is to say, all acquaintance with them, but different writers intimated that they considered the thing impossible and incredible. The first notice of it by Dr. Williams, with which we are acquainted, was in his lectures, published in the *Medical Gazette*, 1837, 8, as follows:

"Dr. Hudson, of Dublin, has also recently described cases in which a loud tympanitic sound on percussion, was presented in the upper part of the chest of a patient affected with pneumonia. Now you will understand how this sound is produced if you listen to this tracheal sound which I get by filling on my windpipe above the sternum. The windpipe also lies under the sternum, and it divides into the two great bronchi which spread between one and two inches below the clavicles. Here, however, the porous lung lies over these

tubes, and intercepts their resonance on percussion; but let this portion of the lung be *perfectly* condensed by a liquid effusion, or perfectly consolidated by hepatization, and you will then get the bottle note of the tubes just as you do of the windpipe when no lung intervenes. The reason why this phenomenon does not occur more frequently is, that it does not often happen that the compression or solidification of the upper lobe is *complete enough*, but since my attention has been drawn to it, I have met with several cases of both pleurisy and pneumonia, in which it existed in a smaller degree.”—*Lectures, London Medical Gazette*, March 31, 1838.

We now dismiss the subject. It is perhaps not worth Dr. Walshe's while to *read* the contributions to this Journal; let him not *refer* to them, and when he again writes books of reference, let him not follow the example of such persons as the one described by a writer in the last Number of the Quarterly Review:—“On speaking some little time ago to one of the principal ‘getters up’ in the biblio-facturing line about the necessity of providing books for an educational work which he contemplated, his answer was given as nearly as possible in these words:—‘Books, books, Sir! they ain’t wanted at all. That is not the way in which these things are done. All those kind of things, Sir, are done at the British Museum. I have a capital fellow, Sir, for that kind of thing—young—full of the fire of genius—capital short-hand writer. Sir, he’ll get you a whole row of quartos in a week, and get all the stuff out of them as clean as a penny!’ And it is by this compendious process of gutting and ‘getting the stuff out of them,’ that nine-tenths of the *stuff* appearing in the shape of works of reference, education, and general information and literature with which we are deluged, are supplied.”

A Practical Treatise on Diseases peculiar to Women.—Part II.
Organic Diseases. BY SAMUEL ASHWELL, M. D., &c. &c.

In a former Number of this Journal, we noticed the first part of Dr. Ashwell's work, and the opinion we then gave of its practical usefulness is fully borne out by this second part, in which we find treated, hysteria, irritable uterus, tumours of the uterus, organic diseases of the os and cervix uteri, congestion of the uterus, acute metritis, chronic metritis, cancer of the uterus, simple ulceration of the cervix and os uteri, corroding ulcer of the uterus, cauliflower excrescence of the uterus, occlusion and rigidity of the cervix uteri, organic diseases of the mucous membrane of the cavity of the uterus, and polypus of the uterus.

The chapters on hysteria, and irritable uterus contain a very good summary of what is known on these subjects, and in the general remarks on the history, symptoms, diagnosis, pathology, and prognosis of uterine disease, the reader will find very valuable information.

Dr. Ashwell divides tumours of the uterus into two classes:

“1st. Tumours, whatever be their size or induration, growing externally, and by projecting the peritoneal coat of the uterus, obtaining from it an external covering. 2. Tumours often, though not constantly, of moderate induration and bulk, which by growing internally, carry before them and are thus invested by the mucous membrane lining the uterine cavity, and hence obtain the name of submucous tumours. It need scarcely be remarked that they are accompanied by an entirely different class of symptoms.”—p. 286.

So far as symptomatology is concerned, this is a good practical distinction, but, considering the different structures of these tumours, one would wish for a more accurate pathological distinction. This, however, Dr. Ashwell does not give, owing probably to his belief that these fibrous or fleshy tumours, as well as others of a harder texture, are of cancerous origin, or in his own language :

“When their pathology is examined, satisfactory reasons may, I think, be adduced to show, that by whatever name they are designated, they ought to be regarded as malignant, although occupying the lowest place amongst adventitious heterologous formations.”

These “satisfactory reasons” are

“1. They possess the structure of compound adventitious cysts, the basis of this class of heterologous formations. 2. In the colour of the contained mass, and in the arrangement of the membranous septa or bands, the containing tissue, they are identical with scirrhus. 3. In hardness, occasionally justifying the application to them of the term stone cancers; they are not to be distinguished from the varieties of carcinoma already mentioned. 4. They occur very frequently in conjunction with growths of undoubted malignancy in other parts of the uterus. 5. And lastly, they possess one especial attribute of malignancy, incurability.”—p. 289.

Here, however, we must join issue with the Doctor. To us these reasons appear by no means “conclusive.” After examining many specimens of fibrous and fleshy tumours and carcinoma, we have thought that we perceived a considerable difference, if not in the “arrangement of the membranous septa,” yet certainly in the “contained mass.” Their equal hardness being admitted does not, we conceive, prove their identity, for calcareous tumours are equally hard, and yet distinct from carcinoma. Their coincidence with “growths

of undoubted malignancy in other parts of the uterus" no more proves their identity than the contemporaneous existence of tubercle and cartilaginous tumour proves them to be the same. The fifth reason would equally prove the identity of any two fatal diseases. On the other hand, fibrous tumours are very rarely indeed attacked by ulceration, carcinoma always, unless the patient be cut off by other disease: fibrous tumours give rise to hæmorrhage very frequently, carcinoma very rarely, if ever: carcinoma generally spreads to the pelvic glands more or less, fixing the uterus in the pelvis even before ulceration sets in. These, and other facts in the pathology and history of these tumours, lead us to the conclusion, that they are distinct from carcinoma, and do not exhibit malignancy of character.

We are indebted to Dr. Ashwell for the information he has given us, as to the effects of iodine upon these tumours. He remarks:

"I have used iodine in diseases of the body, the mouth, and the neck of the womb, and the different success has been precisely what might have been expected. In the walls of the uterus which are not glandular, it has generally restrained the activity of the disease, confining its bulk within the limits it had attained prior to its exhibition; and after watching some of these cases for several years, there has been no increase of the affection. The inferences I have drawn from the use of this medicine are as follows: 1st. Its internal administration and its use by injection is decidedly beneficial; the advantage, if the remedy be judiciously employed, being rarely attended by constitutional injury. 2ndly. In hard tumours of the walls or cavity of the uterus, resolution or disappearance is rarely to be expected; since the growths are adventitious or parasitic, and are not imbedded in glandular structure. Hence, the prevention of further deposit—in other words, the restraint of the lesion within its present limits, and the improvement of the general health, will be the extent of the benefit derived.—p. 293.

The chapter on the induction of premature labour is very good, and we recommend it to the serious consideration of our readers. We have no doubt ourselves that in many cases we may thereby afford the patient a chance of recovery, which otherwise she has not. But as Dr. Ashwell remarks:

"To establish its propriety, it is necessary to prove two or three positions, amongst which I may especially mention the following:—1. That when death occurs, after a labour so complicated, the result is only slightly, if at all, referrible to the uterus, which rarely sustains any serious mischief, but is mainly produced by inflammation, softening and unhealthy suppuration in the growth itself; these pathological changes leading, in some instances, to rapid sinking; while in others, the powers of the system having been less impaired, death

ensues in a few days, from the constitutional collapse, induced by the protraction and difficulty of parturition, and by the extensive injury done to the tumour and other soft parts. And 2ndly, That premature parturition, artificially induced, rarely occasions constitutional mischief, is easily accomplished, and affords the best, and in many instances, the only, chance of a safe result to the mother."—p. 323.

Although we do not agree with Dr. Ashwell in the identity of fibrous tumours of the uterus, and carcinoma, and although we are more than doubtful of the curability of true carcinoma, yet we certainly agree with the following extract :

"I would caution practitioners against the too common error of at once determining an ulceration of the cervix to be malignant, because it may co-exist with doubtful hæmorrhages, induration, and other suspicious symptoms. I know this is controversial ground, and with those who have long regarded every protracted hardness of this part as sure to result in cancer, it will be difficult to produce a contrary impression. With truth I can affirm that such an opinion may in some, if not in many instances be abandoned, and a more favourable one entertained."—p. 406.

The chapter on carcimona and cancer has been carefully written, and contains valuable information drawn from hospital records and the author's own experience.

In the chapter on simple ulceration, Dr. Ashwell classes the ulcers, as seen with the speculum, as follows :

"1. Sometimes they are mere erosions of the mucous surface, redder than the sound membrane around, and the edges sharp and well defined. Such are not unfrequently seen after acrimonious leucorrhœa, the consequence of high living and excess in sexual indulgence. 2. The ulcers of the cervix are occasionally numerous, varying in size from a small pea to a sixpence or a shilling, the larger ones being evidently formed by a coalition of the smaller, and long neglect may have induced roughness of surface and greater depth; and the colour may be a darker red. In such sores there is commonly pain on pressure, and the speculum causes bleeding. The discharge too may be sanguineous, and of a yellow or dirty white colour, but usually when there is no want of cleanliness, without fœtor. 3. There is an ulceration following protracted local irritation, from pessaries, sponge, and contrivances to prevent conception, in which the cervix is enlarged and spongy, with increased heat, and great tenderness on pressure, and an open state of the os. In such cases bleeding frequently occurs."—p. 428.

These ulcers, it is evident, are sufficiently distinct from malignant ulcer; thus

"There is none of the induration produced by malignant deposit, no immobility, no fœtor and pain at all like what we discover in

cancer. Its more stationary character and limited extent, the absence of large hæmorrhages, the comparatively trivial constitutional effects, and the nearly inodorous discharge, sufficiently prove that it is not *corroding ulcer*; nor in most cases will it be difficult to determine whether there be a syphilitic taint about the affection."—p. 429.

The treatment Dr. Ashwell recommends, is local and in some cases general bleeding, baths, mild aperients, and astringent injections, as most successful, with cautery of the diseased surface, if necessary. Of all the caustics which have been proposed, Dr. A. prefers the nitrate of silver. In the majority of cases perhaps it will be sufficient, but we have derived great advantage, even in simple ulceration, from the nitric and nitro-muriatic acids.

The chapter on corroding ulcer is rather meagre, owing no doubt to the limited number of cases which have presented themselves. Dr. Ashwell states, that in twenty years he has seen but two cases, and that

"Out of 500 recorded cases of female sexual maladies in the wards of Guy's Hospital appropriated to female diseases, I do not find one of this affection."

A far greater number certainly present themselves in this city. As to the diagnosis, Dr. Ashwell observes, that "the finger and speculum make the diagnosis easy." No doubt the depth and extent of the ulceration, with the perfect mobility of the uterus, so different from the ordinary cases of cancer, at once reveal the nature of the disease; but when the cancerous deposition follows instead of preceding the ulceration, the diagnosis requires great caution and care.

Further we would wish to enter our *caveat* against the free use of the speculum in these cases: the tissues are so much thinned, and so fragile, that unless the greatest caution be employed, we may lacerate the uterus.

The hint thrown out by Dr. Ashwell of the possibility of cure by cauterization at an early period, is, we think, justifiable on grounds of experience.

With regard to another malignant disease of the cervix, cauliflower excrescence, Dr. Ashwell's experience amply confirms the description given by Dr. Gooch. As to the information afforded by an examination with the speculum, he remarks:

"I have several times seen the tumour through the speculum, and its colour has never been exactly similar. If the examination be made soon after a profuse hæmorrhage, it will not be of a bright red, but of a pale flesh colour; if, on the contrary, it be seen early,

before the waters and sanguineous discharge have drained away the richer and colouring matters of the blood, it will have a pink hue."—p. 438.

The prognosis, according to all authorities, is very unfavourable.

"As to ultimate recovery, there is only the very slightest chance. I have never seen such an instance. But how long life may be protracted, will depend on original strength of constitution, and on the determination and means of the individual strictly to follow out the prescribed treatment. If the disease be early ascertained, and it arise from a part only of the os uteri, instead of its whole circle; if by sexual abstinence, astringent injections, regulated diet, and good air, the watery discharge and the bleedings can be controlled; then several years—four, five, or six—may be added to life. But such steady attention to prescribed rules is seldom secured; and it does not often happen, after removal, that more than a year or two elapse before the tumour grows again. The second operation takes place under less favourable circumstances than the first, there having been in the interval considerable draining and consequent exhaustion, and it is by no means rare for fever and general debility of system to set in, and the sufferer soon sinks. In two of my own cases there were nearly four years between the beginning of the malady, and death."—p. 460.

We have known an instance of cure from excision by ligature, and the free application of nitric acid to the place from which the tumour grew. As to the foolish objections which have been raised against attempting a radical cure, we quite agree with Dr. Ashwell, that "such considerations ought to have no weight," that "without decided treatment life cannot be long preserved, and there are many examples now on record, proving that several years, and with comfort and modified enjoyment, may by such means be secured."

We have thus cursorily noticed a few points in some of the chapters of Dr. Ashwell's excellent volume, but we have been restrained by our limits from entering as fully into the subject as we could have wished. The remaining chapters on rigidity and occlusion of the os uteri, and on polypus, contain most valuable information, and in the well-drawn up cases scattered through the volume, the reader will see the illustration and confirmation of the doctrines laid down in the different chapters. In one or two points we have ventured to differ from the author, but we do it with the greatest respect for his talent and practical information, and we beg to assure him that his work has our best wishes for the success it so eminently deserves.

Medical History of the Expedition to the Niger, during the Years 1841-2, comprising an Account of the Fever which led to its abrupt Termination. By JAMES ORMISTON M'WILLIAM, M. D., Surgeon of H. M. S. Albert, and Senior Medical Officer of the Expedition. London: 1843.

WITH the Niger and the shores of Western Africa our associations are of a melancholy description, and the fate of the late expedition, the medical history of which is described by Dr. M'William, has done little to remove the impression, that the country which has already proved the grave of Parke, Clapperton, the Landers, and other noble and enterprising travellers, is unadapted in its present condition to maintain the existence of certain portions of the human race.

"The extinction of the slave trade," commences our author, "was the grand object contemplated by her Majesty's government in sending out an expedition to the Niger. It was hoped, that by obtaining more accurate information as to the moral and physical condition of the countries bordering on this great river, commercial relations might be established with the native chiefs, and the efforts of Europe generally would be better directed to strike at the root of the internal as well as the external slave traffic, and to the means for the extension of Christianity throughout Africa."

In order to promote these benevolent objects, three small iron steam vessels, the Albert, Soudan, and Wilberforce, adapted for river navigation, were built expressly, placed under the command of experienced officers well acquainted with the coast of Africa, manned chiefly with blacks, or persons already inured to the climate, and furnished with every necessary that science and humanity could suggest, to render the expedition prosperous or ensure the health of those daring spirits engaged in it. Among the latter objects may be mentioned that of ventilating the ships according to the principle of Dr. Reid:

"By means of which a constant supply of fresh air could be kept up between decks, or the external atmosphere, by being passed through a large iron chamber on the upper deck, might be submitted to the action of chemical and other purifying agents previous to its diffusion below."

And, as Irishmen, we may be permitted to express the pride we felt, when paying our last visit to one of these vessels, in company with several members of the Royal Society in 1840, to hear the commander, in his parting address, state that the vessels were navigated by means of apparatus arranged and provided by our distinguished countryman Professor Lloyd, in the

Magnetic Observatory of Dublin, by which the increased influence of an iron vessel upon the magnetic needle was counteracted. Great was the interest excited in London, and indeed in all parts of the empire, and among all classes—scientific and commercial, as well as the lovers of slavery-extinction, for the success of this expedition, certainly the most promising that ever left England for a similar purpose; yet some few sages, and those already well acquainted with the terrors of an African climate, shook their heads, and were silent. This is not the place in which to discuss the probable causes of the failure of the expedition, nor the probable success of any future ones; the work we quote from is the medical not the general history of the expedition, which, to say the least of it, was most disastrous.

The vessels arrived at Sierra Leone in June, 1840, and there completed their crews with picked men from the native populations, principally Kroomen. Dr. M^cWilliam describes a tornado, and its consequences, which occurred while laying off this portion of the coast, with the truth of which we ourselves have been often impressed on other parts of the African shores.

“A few minutes before eight, P. M., a black ring encircled the horizon, and the whole arch of heaven seemed enveloped in gloom. A few drops of rain fell, vivid flashes of forked lightning followed, the thunder pealed over our heads, the wind blew with violence, and the rain then poured in torrents. What made most impression on me during this fearful war of the elements, was the fearful transition from pitchy darkness to broad glaring light. At one moment nothing in nature was visible, and in another the whole atmosphere would be suddenly illumined by lightning, so as to make objects in the streets ashore distinctly perceptible. The Commissariat House was damaged in three places. Solid masses of wood, that formed the angular supports of the building, were shivered, one of them throughout a length of six feet, the boards that had been nailed to it were torn and destroyed. The attracting points seemed to have been the iron fastenings of the water spouts, which descend from the roof at each corner of the building. In the small village behind the barrack hill an Akou man and his wife were killed. During the tornado they had been engaged in worshipping the thunder, with the usual accompaniment of beating ‘tom toms,’ hallooing, and other noises; the hut was struck with lightning, burnt, and with it the votaries of the fearful element. Accompanied with Dr. Stranger I visited the place next day, and the sight that presented itself was at once humiliating and appalling. The track of the lightning was apparent across the little inclosure surrounding the hut. The hut was levelled with the ground. Near it lay the dismal remnants of mortality, partly reduced to cinder. All the muscular substance, which had been reduced by fire, was dry, shrivelled fibre. The viscera protruded, were covered with flies, and

in the last stage of decomposition. The bones of the head were white, as if they had been bleached for years, those of the legs were partly calcined."

This is an effect of lightning never seen in those who have been killed by it in this country.

Like most African nations, the different tribes on this part of the coast are distinguished, independent of all physical formation, by their mode of tattooing; but the Kroomen, the most civilized race, point out a peculiar

"Swelling on the inside of the outer ankle, as a true 'Fishman mark.' This assumed mark of distinction is not invariably present, but I have certainly observed it in a great number of Fishmen. It consists of a protrusion of the tendons of the extensor muscle of the toes, through a rupture of the sheath, which is induced by the continued strain exerted upon it from the attitude of the Fishman in his canoe, when he rests nearly altogether on the upper part of the foot, bent under the ankle.

"The Kroomen and Fishmen, according to their means, have an indefinite number of wives: both of them worship the devil. 'God,' they say, 'does nothing but good: he can do no evil. The devil can do evil only, and is therefore to be feared.' On this account they propitiate the devil by votive offerings of various kinds. Such is also the worship of the Sherbre, and several other tribes on the west coast."

This, as a friend lately said to us, is at least conciliation with a vengeance.

The expedition had now entered the river, and proceeded as far as Iddah.

"Up to this time the expedition had been fortunate beyond all expectation. The Delta had been passed, and we were entering the valley of the Niger under circumstances seemingly the most auspicious. The crews were in the best possible condition, and with a general buoyancy of feeling looked forward to the period when the vessels were to ascend the river, while they contemplated with delight the novel and diversified scenery of the high land before them. With such prospects so favourable beyond all anticipation, it is not to be wondered if we indulged a rather sanguine hope that a continuance of health would be granted to us, and that we should, under Providence, thus be enabled to persevere in the great object of our mission. But it was otherwise ordained.

"September 4th. Fever of a most malignant character broke out in the Albert, and almost simultaneously in the other vessels, and abated not until the whole expedition was completely paralyzed."

With this fever, its character, causes, and treatment, &c., we have now particularly to do, and, therefore, while we can most conscientiously recommend the book to our readers, we

quote the following passages as affording a brief *resumé* of its contents:

“ *Precursory Symptoms and Mode of Invasion.*—There was little uniformity in the character of the premonitory symptoms, or in the mode of attack. A number of the patients were for twenty-four hours, and sometimes more, sensible of headach, often slight; and some experienced painful scintillations along the spine, attended with a feeling of coldness, before they considered it necessary to apply for medical assistance; while in others the approach of the disease was announced by a sensation of weakness, and sometimes of burning heat in the epigastrium, giddiness, lassitude, tremulous and foul tongue, with small quick pulse, and general oppression succeeded. The eyes looked heavy, were occasionally suffused, and the motions of the pupil were performed languidly. On two occasions that came under my notice, the individuals were seized without any warning symptom, and were at once so overwhelmed as to be for a time deprived of motion and sensation.

“ In general, however, some of the abovementioned symptoms, varying in duration and intensity, preceded the accession.

“ *Character, Course, and Duration of the Symptoms.*—The accession was seldom accompanied by very marked shivering, yet previous to the period of vascular excitement, the patient usually experienced a sensation of coldness, and for the sake of warmth would fain have exposed himself to the rays of the sun. He would shortly express a wish to lie down, and would complain somewhat suddenly of increase of headach or giddiness, and intense heat of the skin, which had a dry parched feel, restlessness, intolerable nausea, and difficult breathing. The dyspnoea in several instances, particularly in my own case, was extremely distressing, and continued from one to four hours, until relieved by spontaneous vomiting, or the occurrence of diaphoresis. Headach was with some the most prominent symptom during the hot stage, and the feeling was described as that of a cord being tightly girded round the temples. The thirst was very urgent; the tongue was foul in the centre, moist, clean or reddish, and invariably marked by indentations on the edges. The countenance was more or less flushed, the eyes occasionally suffused and always looking wild. Pulse rapid but small, frequently feeble; thirst urgent, bowels constipated, and urine passed often and in small quantity. There was in general tenderness of the epigastrium, sometimes acute, but often not discoverable unless upon pressure.

“ In some cases, coldness of the stomach was complained of some days before death. A subsidence of febrile action in general followed in from three to six hours, or, at all events, the symptoms, if continued beyond the latter period, became much mitigated. Diaphoresis came on, the thirst moderated, and the signs of oppression in a great measure disappeared. The principal complaint at this period was from *the disagreeable odour of the perspiration, particularly in those cases that subsequently proved fatal.* I was not sensible of this

peculiarity in the smell of the perspiration in my own case, but I perceived it very distinctly in several others. The sweating continued until from eight to twelve hours had been occupied by the whole paroxysm. The patient, although considerably exhausted, expressed himself as free from all trouble, and the countenance also indicated improvement. This seemingly favourable change did not last long, for the accession generally returned in from six to ten or twelve hours. Occasionally the respite extended to twenty-four hours. In a few cases, there was a treacherous interval of forty-eight hours, in the early period of the disease; but these invariably assumed afterwards a low malignant type. The fever in them seemed to have rested only to give strength for a fresh accession.

"The accessions did not seem to observe any law of periodicity. They came on, disappeared, and returned at all hours of the day and night. The evening, however, was a more common time of accession than any other; in which case, after the cold sensation had passed off, the paroxysm generally ran through its stages in the course of the night, and had suffered a considerable remission by the hour of breakfast (eight) the next morning.

"In a few instances the remissions were as complete as in the interval of ague. These were, however, only exceptions to the general rule, for total absence of fever was indeed of rare occurrence during the course of the disease.

"I cannot say that the influence of critical days was at all apparent, further than if no material improvement was evident by the eighth or ninth day, the prognosis was then most gloomy. The patient became weak, irritable, and exhausted, and extremely restless. The remissions were most indistinctly marked; the skin was dry and constricted, the tongue parched, pulse small and irregular; the fever, in short, now assumed a low asthenic form. Occasional symptoms of mental aberration would appear at this period; the countenance pale and shrunk; but not unfrequently the patient would talk most rationally upon the state of his mind, so far as regarded his eternal happiness. In several cases this stage was wonderfully protracted, as in Case XII.

"Local pain was seldom much complained of: indeed, with the exception of headach (often very slight) at the commencement of the paroxysm, there were several instances in which the patients expressed themselves as quite well throughout the disease, although this ultimately proved fatal.

"When the disease was about to take a favourable turn, the remissions became distinctly marked, and the intervals were lengthened. The countenance (the best criterion) assumed a natural expression, a certain look of convalescence, that one can only become acquainted with by experience and contrasting it with that indicative of a fatal termination. The skin became moist, the thirst diminished, the pulse was more voluminous and softer; the tongue gradually lost its tremulousness, and could be more easily thrust out of the mouth; it

often continued a long time loaded, but the crust was less brown, and more moist, and seemed to have lost its firm attachment to the organ : at this period diarrhœa was by no means uncommon, and also a copious flow of urine, which latter was a very favourable symptom. A strong desire for food was expressed by most of the patients who had advanced thus far, and I had more than once cause to regret having gratified it.

“ Such were the general characteristics of the fever as it occurred in the Niger ; but the description is not to be regarded as applicable to all the cases, for, on board the *Albert* alone, there were several in which there was neither complaint nor evidence of suffering of any kind. These was a disinclination to be spoken to, or to be in any way disturbed ; and a listless expression of countenance, with a clammy skin, and small pulse. The periods of exacerbation were so feebly marked as to be scarcely perceptible: food and medicine were taken when offered, but seldom or ever was anything asked for, and the invariable answer to inquiries after their health was, ‘ I am very well.’ Constant watchfulness was the only appreciable symptom in these cases, which all terminated fatally, seemingly from mere exhaustion. It would have been interesting to have ascertained the nature and amount of the organic lesions in these cases ; but unfortunately, circumstances did not permit any of the bodies being examined.

“ *Contingent Symptoms*.—Of the contingent symptoms the most prominent were delirium, yellowness of skin, and convulsions, affecting various parts of the body.

“ *Delirium* was a very bad symptom in the fever of the Niger : of twenty-one cases in which it occurred fourteen died, of whom one was drowned by eluding his nurse, and jumping into the river. It was not uncommon for patients, whether affected with delirium or not, to be haunted by dreams of a frightful nature, as of being drowned, stabbed, or falling from a precipice. In the worst cases the mental aberrations were expressive of some personal misfortune, or unheard-of disease. The imposition of the slightest restraint was always a heavy grievance. In one case the patient constantly harped upon his being condemned to everlasting punishment ; when reason for awhile resumed her authority he would express shame and contrition for previous misconduct. The most solemn promises to behave well, if left at liberty, were not unfrequently made, only to be broken, whenever an opportunity offered for the exercise of the cunning, so characteristic of this stage of the disease.

“ *Petechiæ or Sudamina* were not observed in any case. In two cases which proved fatal on the seventh day, livid blotches appeared on the feet and hands, and gradually extended to the chest and abdomen.

“ *Yellowness of the Skin* occurred in nineteen cases, thirteen of which were fatal, and the average day of the appearance of this symptom was the ninth. The yellow colour was first seen in the con-

junctiva, and afterwards extended over the face, arms, and the rest of the body. It was in general light, and did not appear after death in any case in which it had not existed during life.

"The fæces in these cases were generally of a bilious colour; the urine deposited a sediment, but its chemical qualities were not ascertained.

"*Convulsions*.—In three of the fatal cases on board the *Albert*, the muscles of the pharynx and larynx were convulsively affected, preventing or much impeding deglutition. In two others, also fatal, the spasms were confined to the muscles of the abdomen and limbs. Mr. Loney, the assistant-surgeon of the *Dolphin*, the vessel that received the sick from the Soudan, at the mouth of the river, informed me that out of eight deaths, which took place during the passage to Ascension, there were two cases in which deglutition was at first difficult, and soon stopped altogether, and two others in which there were general convulsions, more especially of the extremities.

"In one case paralysis of both arms, from which the patient has not yet altogether recovered, supervened during the early period of the disease.

"Partial paralysis of the right arm occurred in my own case, four months after convalescence from the fever had been going on, and lasted about six weeks. One man, on board the *Wilberforce*, was placed on the list, for paralysis, in November, after having had fever in the Niger.*

"In no case was there the slightest appearance of 'black vomit.' Bilious vomiting was common in the early stage of the disease; and the attendant retching was very troublesome. Irritability of the stomach, although more frequent at the beginning of the fever, was by no means confined to this period, for it was observed to have occurred also during the height and decline of the disease.

"*Morbid Appearances*.—From circumstances which could not be controlled, the post mortem examinations were by no means so numerous or scrutinizing as is desirable in the investigation of a disease whose causes and nature are comparatively so little known. The results however, although limited, are so far satisfactory that they corroborate, in most respects, opinions derived from former experience on the coast of Africa, more especially with reference to the pathological condition of the gastro-enteric mucous membrane, during and after certain forms of remittent fever. The following statements are founded on the examination of eight bodies.

"*Head*.—In two cases where the head was examined, softening was found in the corpus callosum and walls of the ventricles. In one case there was a small quantity of serous fluid in the base of the brain, and an unusual proportion in the ventricles. The dura mater

* Captain William Allen informs me that he suffered from partial paralysis with wasting of one arm, for many months after an attack of fever, which he suffered when in the expedition up the Niger with Lander.

was always sound. The pia mater in one case red and injected. No subarachnoid effusion was observed.

"*Thorax*.—The contents of the thorax were in nearly all cases healthy in appearance. Adhesions between the costal and pulmonary pleuræ were found in one instance, with tubercular deposits in the lungs in the state of induration. In another, a cartilaginous state of the tricuspid valves, with serous effusion in the left pleural sac.

"*Abdomen*.—The peritoneum and its processes, as well as the surface of the intestinal tube, had in general a bilious tinge.

"*The Stomach*.—In several cases the stomach contained from one to five ounces of yellowish-green fluid. The mucous coat was invariably softened, whether this fluid were present or not. In three cases livid patches were variously distributed over the inner surface of the stomach, becoming more distinct when the mucous tunic was scraped off, exhibiting stelliform nuclei in their centres. In two cases, the livid marks were arranged in the form of parallel streaks. These pathological appearances were chiefly in the splenic extremity of the stomach and near the pylorus. In one case there was remarkable venous arborescence on the exterior of the stomach, attended with general engorgement of the portal system. Small points of ulceration were observed in three cases, and slight thickening of the mucous lining in one instance only.

"*Duodenum*.—The lesions observed in the duodenum were of the same nature as those in the stomach, but much less marked. In one case the lower portion of this gut contained a yellowish secretion, of the consistence of mucus.

"*The Jejunum* was free from disease, and likewise the ileum, until within three feet of its lower end, where were observed softening of the mucous lining generally and livid spots. A series of small ulcerations were seen in four cases. In one, the membrane was thickened, rough, and the ulcerations had nearly perforated the bowel; this case proved fatal by terminating in dysentery. The agminated glands of Peyer were distinct and enlarged in three cases.

"*Colon*.—The colon was usually nearly empty. On these occasions a dark, bilious, pultaceous matter was found in this portion of the tube, but in small quantity only; it was viscid and tenacious, adhering to the mucous tunic: where lividity or ulcerated points were found at the lower end of the ileum, the same lesions were seen to exist on the arch of the colon. Softening of the mucous coat was remarkable in three cases. In that of the case of dysentery already mentioned, there was softening of the tunic where it was not ulcerated, and induration and elevation round the edges of the ulcerated patches.

"*Liver*.—The liver was congested in one instance; larger than usual in two cases. It was anemic in two cases where the patients died early, and on two other occasions when death took place long subsequent to febrile action. In the latter cases this organ was of a

pale gray colour, and had a dry appearance on being sliced. This condition was not confined to one lobe.

“*Gall-bladder*.—The gall-bladder was distended with bile of the colour and consistence of tar, in three cases; one of which was fatal on the third, one on the seventh, and the other on the ninth day. In another instance the gall-bladder was nearly filled with bloody bile. The man in this case died suddenly, many weeks after the fever had left him.

“The enlarged condition of Peyer's glands, which is regarded by Chomel and Louis as constant in the typhoid fever of France, occurred in three cases out of eight that were examined. In four cases, the subjects of which, with one exception, died early, slight ulcerations of the gastro-enteric mucous membrane were observed. This fact is worthy of attention, inasmuch as it would seem to imply that the cause of the river fever, in whichever way it is introduced into the system, induces an unhealthy action in mucous surfaces much more rapidly than even the low typhoid fevers of France. Chomel does not consider that ulcerations take place in typhoid fevers earlier than the twentieth day, when there is, also, softening of the mucous membrane around the follicles, or in that part of it which covers them. Louis found the patches of Peyer natural in twenty autopsies, made by himself, of yellow fever cases at Gibraltar, during the epidemic of 1828.

“*Spleen*.—In one case the spleen was enlarged, soft, and breaking down under the fingers; in another enlarged, gorged with blood, but firm. This viscus was not altered from the normal condition in the other cases examined. The *pancreas* was not in any case otherwise than natural. The *kidneys* were mottled and larger than usual on one occasion. The *bladder* was in general collapsed. A case in which bloody urine was voided was not inspected.”

To be at all appreciated or understood, this interesting work must be carefully perused and examined in detail: with one more extract we conclude this necessarily imperfect notice:

“When out of the whole expedition there were only fifteen whites that were not attacked with fever in the Niger, it is scarcely possible to offer any opinion as to how far the susceptibility to this treacherous disease was influenced by temperament or idiosyncrasy. Of the blacks, consisting of natives of various parts of Africa, including Kroomen, Americans, West Indians of African origin and East Indians, to the number of 158, eleven only were affected by the fever in the river: they (the eleven) had all been in England, and for some years absent from their respective countries. The disease in them assumed a comparatively mild form, and in no case did it prove fatal; showing that the immunity from endemic disease in warm countries, which is enjoyed by the dark races, is to a certain extent destroyed by a temporary residence in another climate.

“The question as to whether contagion contributed to the spread of the disease on board of the ships may, in my opinion, be briefly disposed of. All were exposed to the same influences, and nearly all were attacked with fever. Two only of the four medical officers who died had been in attendance on fever patients. Dr. Pritchett, Mr. Thomson, Mr. Stirling and Dr. Stanger were among the few who escaped being seized with fever, although they were in constant intercourse with the sick; and I was the last person in the *Albert* laid down with fever. The nurses on board the *Albert* were among the latest taken ill, and one escaped altogether. No fact came under my observation affording the slightest evidence that the disease was communicable from one person to another.

“Does one attack of river fever afford any protection against a second?

“My own experience, added to information obtained from many of my brother officers, and from Mr. King, the surgeon of the *Ethiopia*, who has been more in the Niger than any other medical man, is wholly unfavourable to the opinion, that one attack of river fever affords any immunity from a second. On the contrary, those who have once suffered from this treacherous disease seem particularly predisposed to it, if they again venture within malarious influence. Of those who had the Niger remittent, on board the *Wilberforce* in 1841, many were again attacked with fever, on the return of the vessel to the coast the following year, while surveying the Cameroon river and Amboises islands; and when that vessel proceeded up the Niger the second time, in July, 1842, six out of seven who had already passed through river fever, were again seized with it, from the effects of which two died. In many cases the character of the second attack may not be exactly like that of the first, but Mr. Stirling, who saw the patients on the return of the vessel to Fernando Po, considered the fever as in no way differing from that which had come under his observation when in the river during the previous year.”

Dr. Stanger, one of the most healthy persons in the whole expedition, subsequently informed the writer of this notice, that before he entered the river he commenced the use of quinine, and never left it off till he quitted the shores of Africa, and he never had fever at all.

The Baths of Germany, considered with reference to their remedial Efficacy in Chronic Diseases; with an Appendix on the Cold Water Cure. By EDWIN LEE, Esq. Second Edition. London, 1843.

THE majority of writers on the subject of mineral springs, complain of the ignorance and scepticism prevailing among medical men, as to the power and efficacy of these agents in the cure of disease. If such a charge be well-founded, it cannot, at any rate, be ascribed to the absence of published information on this branch of medical science, or to the scarcity of authors who have toiled for the diffusion of useful knowledge, respecting the properties and uses of natural mineral waters. The press of Germany has been peculiarly prolific in publications of this nature, having already produced some hundreds; and it would seem that so good an example has not been thrown away upon our own countrymen, if we may judge from the numerous treatises on mineral waters, of which the literature of Great Britain can now boast.

Of these, the work before us on the Baths of Germany, by Mr. Lee, is by no means an unfavourable specimen. Unlike some of his predecessors, Mr. Lee has presented his remarks in as condensed a form as is consistent with perspicuity; and has restricted them to points in which valetudinarians and members of the profession are likely to be most interested. His fitness for the task he has undertaken is based upon a personal inspection of the springs mentioned in his volume, several of which he has repeatedly visited in the course of the last ten years; and in addition to the actual superintendence of their effects during so lengthened a period, he appears to have carefully studied, and availed himself of the best standard authorities upon the subject.

Mr. Lee's work having already passed through a first edition, may fairly be supposed to have received, in some degree, the stamp of public approbation; we shall, therefore, confine our notice to a few general remarks, without entering minutely upon an examination of the details of the volume.

The first division of the work embraces the Baths of Rhenish Germany and the adjacent districts; the second includes those of Central and Southern Germany; and in each division the springs are arranged in two classes, namely, thermal springs, and cold springs.

After two short prefaces and a long postscript, the author presents us with an *avant-propos* (likewise prefixed to his

"Mineral Springs of England") in which he advocates a modified humoral pathology, ascribing the origin of many, particularly chronic diseases, to an altered state of the fluids and of the nervous system. In support of these views he quotes the opinions, and refers to the experiments, of various distinguished pathologists, physiologists, and chemists.

Having referred to the numerous inoculations of the sympathetic or organic nerves with those of the cerebro-spinal system, and to the influence of the former over the action of the capillary vessels and the functions of nutrition and secretion, he proceeds to trace the dependence of disease in the organic nervous system upon alterations in the quantity or the quality of the blood by which it is nourished; and states his conviction that an abnormal condition of the ganglionic system so produced, does not fail to react upon, and increase the disordered condition of the vascular system.

He concludes his *avant-propos* by remarking :

"It would be out of place in a small work like the present, *which is intended as much for general as for professional readers*, to enter more fully into the consideration of this subject; enough having been advanced to indicate that, in chronic diseases more especially, our attention should not be too exclusively restricted to the most prominent symptoms, but that these should be traced to their origin, which will mostly depend upon an abnormal condition of the blood, or of the nervous influence; to remedy which, our means of treatment should be chiefly directed; and of these means none are more efficient than the internal and external use of mineral waters, which, by their penetrating operation, and the facility with which they are absorbed, tend most effectually to the end proposed."

From the foregoing passage it appears that Mr. Lee intends his work for general as well as professional readers; but we very much fear that few of the former will be much enlightened by the contents of his *avant-propos*, unless they should be better acquainted than we anticipate with the anatomy and physiology of the nervous and circulating systems.

In his "General Remarks on Mineral Waters," Mr. Lee combats the opinion of those who ascribe the benefit arising from a visit to a mineral spring, *entirely* to the journey, the mental relaxation, and freedom from the cares of avocation, the exercise in the open air, and the alteration in their habits of living.

"That many invalids would derive great advantage from the mere change of air, scene, and mode of life, is unquestionable; and it is equally true that without these important auxiliaries, the beneficial

effects would not be produced in many instances ; yet there is no doubt that, in the majority of cases the benefit is mainly to be attributed to the medicinal operation of the water, which, though slow, and often not productive of immediate and active effects, is, on that very account, more suited to the class of chronic complaints, in which mineral waters are usually employed. It must also be borne in mind, that in several of the worst cases, in those who resort to mineral springs for relief, these auxiliary circumstances can have no influence, and the benefit obtained is clearly to be ascribed to the waters alone. Many persons are unable to take exercise, care little about the beauties of scenery, take no interest in public amusements, soon become tired, and experience discomfort at being separated from their homes and friends, and are induced to subject themselves to the inconveniences of a long journey to a mineral spring, by the expectation of the benefit which they know they are likely to derive from it."

The author then proceeds to shew the power and remedial efficacy of mineral waters by several examples, and quotes at considerable length the writings of various continental authors, to prove the great advantage to be derived from them in the treatment of chronic diseases, and the caution required in their administration.

It has been frequently observed that the water of a hot spring is longer in cooling than water artificially heated up to the same point ; and many physicians residing at bathing places, and other chemists agree in the belief of their singular capacity for telluric heat ; this quality, however, has been said to depend upon the saline ingredients with which the waters of a mineral spring are charged, and the experiments of MM. Lonchamp and Anglada have shown that there is nothing in the heat of a thermal spring which can be considered to form an exception to the ordinary laws of caloric.

We cannot follow the author through the whole of his remarks on the state of admixture and chemical combination of the saline, metallic, and gaseous substances with the waters of mineral springs ; but we must observe that it is essentially important that practitioners should be acquainted with them in order to understand the mode of action, and to direct the administration of mineral waters.

In the descriptions of the baths of Germany, whatever is striking in the history, topography, climate, scenery, and fashionable attractions of each individual spa, is presented to the reader in a concise, but agreeable form ; the best hotels and lodging-houses, and the most salubrious and convenient situations for the residence of invalids, are pointed out ; the different springs and their respective chemical peculiarities, carefully noted ; and ample directions given to guide the va-

letudinarian in the use of the waters. The principal diseases, in the treatment of which each particular spring has been found beneficial, are also enumerated, and many judicious remarks upon its action and effects are annexed, which will prove more especially useful to the medical profession. The physician who advises a patient to visit a continental watering place, is constantly applied to for instructions by which the administration of the waters shall be regulated; such directions, however, when given, are, we believe, but seldom attended to: and for this reason. The invalid, upon his arrival at his destination, usually places himself under the care and management of one of the local practitioners; who generally, under some pretext or other, directs a course as nearly as possible the reverse of that enjoined by the British practitioner. It becomes then a matter of no trifling importance to be able to recommend to a patient, under such circumstances, a physician upon whose skill and judgment full reliance may be placed by all parties.

We observe, that, in the descriptions of several of the German Baths, Mr. Lee has introduced the names and opinions of the most eminent medical men in their respective localities: but we regret that he has not afforded us this useful information in a greater number. When so many places are treated of, it would occupy too much space to enter more fully into the consideration of this part of the work; we can, however, confidently state our opinion that the account which the author gives of the Baths of Germany, embraces every point of practical interest or importance connected with his subject.

The French and Swiss baths being comparatively little resorted to by English invalids, have not received a very lengthened consideration.

The increasing notoriety of the cold water cure, both on the Continent and in Great Britain, has induced Mr. Lee to give, in an appendix, a short descriptive notice of this method of treatment; commencing with a brief sketch of its originator, Vincent Priessnitz, and his establishment at Graefenberg. Since 1824, not less than forty hydropathic establishments have been formed in different parts of Germany, and most of them under the superintendence of physicians. Marienberg is stated to be one of the most extensive and best conducted of these institutions; it is a large edifice (formerly a convent of *dames nobles*, dedicated to the Virgin), standing on an eminence which overlooks the town of Boppard on the Rhine, and is under the joint direction of Dr. Schmitz and Mr. Mayo, late surgeon to the Middlesex Hospital.

The mode of life, and method of treatment do not appear to vary materially at any of these places; though at Graefenberg, the accommodation is very indifferent, and the diet of a very uninviting description; the dinners being usually composed of cucumbers, cabbage, acid sauce, pork, heavy dough puddings, and other indigestible, and no doubt cheaply purchased articles. Every thing of a stimulating nature, as spirits, wine, coffee, tea, &c., is prohibited.

We do not intend to follow Mr. Lee through the details of the treatment adopted by Priessnitz and his followers, the unfortunate results of which are recorded in every unprejudiced account which we receive from Graefenberg, as well as in the pages of our medical periodicals.

It must be evident to every impartial observer that one great cause of the celebrity of Vincent Priessnitz is his tact in the selection of his cases; even those who have followed the practice at Graefenberg, and have written in favour of the cold water treatment, state that a large proportion of the inmates, on their arrival, labour under no more serious ailments than might be relieved by residing in pure air, by exercise, and plain diet. Dr. Ehrenberg, whose exposition of the hydropathic system is quoted by Mr. Lee, assures us that during his stay at Graefenberg, instead of an assemblage of rare and serious diseases, he saw, on almost all sides, only robust individuals, and fresh-coloured countenances. This enigma was not long in being solved. Among the fresh visitors who daily arrived, there were not wanting persons afflicted with serious diseases, who for their part would willingly have contributed to increase the fame of Graefenberg; but when the first glance taught Priessnitz that they were seriously ill, he sent them away for the most part, telling them that they would not have strength to go through the treatment. He goes on to state:

“Priessnitz himself does not conceal that at most an eighth only of the number of those who address themselves to him are admitted into his establishment. One might then expect that all those whom he receives obtain a cure. This, however, is far from being the case; and for my part, all those whom I saw go away from Graefenberg, left it suffering very much; and several whom Priessnitz had declared incurable, were cured by Weiss, at Treywalden.”

That a considerable number of reputed cures by the cold water system are either false or exaggerated, while the unsuccessful cases are either concealed, or their issue attributed to other than the real causes, is shown by the further testimony of Dr. Ehrenberg.

"Chance furnished me with several opportunities of meeting, a month or two after their departure from Graefenberg, with persons whom I had seen give themselves up to all the exaltation of their enthusiasm, and I was quite surprised at the change which had taken place in their sentiments. A short time ago, I met a young Prussian officer, with whom I had dined several times at the table of Priessnitz. 'And how are your headaches?' said I, after the usual salutation; recollecting his bragging, of which I had been more than once a witness; he replied with some confusion, 'my pains are the same as formerly, and I should have done much better had I gone to pass six weeks at Tæplitz, instead of losing six months at Graefenberg.' Another patient told me, that far from being satisfied with his journey, he believed he could date from that period the sufferings which now tormented him much more than those for which he had gone to Graefenberg."

The manner in which Priessnitz accounts for his patients when they happen to die under his care, is remarkable.

"After my departure from Graefenberg," says Dr. Ehrenberg, "a lady died there; it was then the custom to ascribe the occurrence of death to the bursting of an abscess internally, but on this occasion, the opening of the body gave the lie to the favourite explanation. When the relatives inquired what had been the cause of the fatal termination of the case, the answer which they received was, that the patient's neck was too short to allow her to live. Where could another man be found who would dare thus to express himself? In what other place than Graefenberg would there exist a public, who instead of perceiving in such an answer the proof of the grossest ignorance and of an unblushing effrontery, would, on the contrary, discover that of a profound wisdom?"

In conclusion, we consider Mr. Lee's work an extremely useful publication; and although, as he himself admits, it has some defects, yet its general accuracy in all important details, and its conciseness, recommend it strongly to the notice of the public, and especially of the medical profession.

Clinical Remarks on certain Diseases of the Eye, and on Miscellaneous Subjects, Medical and Surgical, &c. &c.
By JOHN C. HALL, M. D. (of East Redford). London, 1843; Churchill.

WE have read this work for the double purpose of instruction and review, and cannot extend to it charitably, as we are disposed, even the meed of praise due to industry or arrangement—novelty or interest it possesses none; and wherefore ever brought before the public we cannot divine, not being within the puff of a Charlatan, nor evidently the speculation

of a bookseller. If object it was ever intended to have, it must have been that of illustrating a few cases in the ordinary course of practice treated by the author; one of which may lead us to suppose, that he (the author) has an aristocratic connexion, for the subject of it was a girl whose name was, as is usual in such cases, from motives of delicacy suppressed, but of whose standing in society we may form an opinion, from her being "the daughter of the coachman of Granville Harcourt Vernon, Esq., M. P., for East Redford," p. 29. The Doctor is remarkably polite to his patients as well as in his writings, for whenever he had occasion to operate, as at p. 65, the "young lady was *requested* to sit in a chair, while an assistant separated the lids," &c., &c. Without particularizing more fully, for we really know not what to quote; that might in any way interest our readers; we may mention that the work is divided into two portions, and that the first and most extensive is devoted to "certain Diseases of the Eye," some of which, from the author's description of them, appear to us very *uncertain*. This part is chiefly compiled from the standard writings on this subject; or made up of quotations from Mackenzie, Laurence, Meddlemore, Tyrrell, or Scarpa, on whose works indeed it seems intended as a running commentary, and more adapted to the pages of a review, than any separate treatise.

The second portion of this work is devoted to a number of medical and surgical subjects; fistula, fracture, cancer, uterine hæmorrhage, gout, and indigestion, &c., &c. each handled in a manner similar to the diseases of the visual organs. On the subject of bronchocele, however, we must not omit mentioning that Dr. Hall has related a number of cases cured by the use of Liq. Potassæ and leeching, the former in doses of η xxiv. three times a day.

The Anatomy of the Arteries of the Human Body, with its Application to Pathology and Operative Surgery, in Lithographic Drawings, with practical Commentaries. By R. QUAIN, Professor of Anatomy in University College, &c. &c., and JOSEPH MACLISE, Esq., Surgeon. Folio.

WE have received six Numbers of this excellent work, viz., Nos. 10, 11, 12, 13, 14, and 15. Each Number, as many of our readers are probably aware, consists of a fasciculus of lithographic plates, in many instances as large as the natural size of the objects they represent, with explanatory letter-

press, octavo size. The plates are exceedingly beautiful and faithful, and many of them wonderfully true to nature, exhibiting the force and spirit of a first-rate artist. Plate 55, Part II, in which the subject is a boy, exhibits, independent of its anatomical merits, the purest artistic feeling. In this respect these plates remind us of the admirable delineations in Cowper's *Anatomy*, Mr. Maclise having the rare power of displaying at once both accuracy and freedom. We have only one plate that we are disposed to find fault with; in plate L, fig. 1, the pancreas appears to us to present more resemblance to the diamond-shaped divisions of a pine-apple than the natural appearance of the organ, but this perhaps is hypercriticism.

As a book of reference, to refresh the memory of the anatomist, or of the surgeon, previous to the performance of an operation likely to involve the arteries, this beautiful work must be of great value, and its cheapness puts it within the reach of all. Mr. Quain has down all that might be expected from his high character in the descriptive letter-press; the usual and the unusual distribution of the arteries being carefully described, as well as their surgical relations.

Some Account of the African Remittent Fever which occurred on Board her Majesty's Steam Ship Wilberforce, on the River Niger, and whilst engaged on Service on the Western Coast of Africa; comprising an Inquiry into the Causes of Disease in Tropical Climates. By MORRIS PRITCHETT, M. D., F. R. G. S.

THIS work is one of great practical importance to the medical profession, particularly to the naval and military departments, as it contains many remarks bearing the stamp of close observation, on the subject of malaria and miasmata; from which both the navy and army have at all times so greatly suffered; but yet there is a want of care in the compilation, for which the author in his preface apologizes:

“The pressure of the duties which devolved upon me during the prevalence of the fever must plead as my excuse for any omissions which may be observed in my account of the cases:—in consequence of almost every European in the ship being attacked, and the services of both the assistant surgeons being required elsewhere, added to the indisposition of the late Mr. Woodhouse, Assistant Surgeon of the *Albert*, during the time he was on board the *Wilberforce*, I was left

nearly unaided, and was at one time actually compelled to perform all the duties of apothecary, nurse, and cook, besides those of medical attendant to the whole of the sick on board. For a period of nearly six weeks I was never undressed, the nature of the cases requiring close watching both by night and by day, immediately to combat unfavourable symptoms as they arose. The active duties which have recently again devolved upon me, and the hurry of preparation for foreign service, have, I fear, prevented that careful revision which would have enabled me to correct errors and to make additions."

Our author commences by giving a slight sketch of the voyage, and places where they stopped; also an account of the cases of fever, which amounted to fifty, but we regret that he did not enter into further details of some of the cases that occurred after leaving Grand Bassa, or mentioned whether the symptoms were similar to those that occurred at the confluences of the Niger and Tchadda: those that were first attacked with the fever were men of colour. The author remarks that—

"These were the persons principally employed in the necessary business of wooding and watering, and had been selected for the duty in preference to white men, in the belief that they would be less likely to suffer from exposure in the new country than whites. I had, however, already had opportunities in the West Indies of observing that negroes seem frequently to have less power of resisting oathogenetic influences in foreign climates than white men. And many of the blacks and mulattos we had on board having become accustomed to the colder climates of the north, they were probably at east as liable to be attacked with disease as the European."

Again he says, after having given a short statement of the seven cases of fever which occurred among the men of colour, *riz.*, the day of attack, and whether the patient was on shore at Grand Bassa, or Sierra Leone, &c., that

"Up to the date of our entering the Niger, five cases of fever had also occurred among white men. One only of these had been employed in wooding, &c., at Grand Bassa,—the remaining four had not been out of the vessel. But in none of them were the symptoms urgent, and they speedily gave way in all to proper treatment. The disease was decidedly of a more mild description than in the black and coloured men before specified.

"From the foregoing it would appear that the negro, when he has become accustomed to a European climate, is less able to resist the causes of disease in hot countries than the white man. The officers generally were greatly exposed to atmospherical vicissitudes and duclemencies, and to fatigue, and yet without fever, in a single instance, having presented itself among them."

We will now quote a passage from the latter end of the book, in order that our readers may the more easily judge of the justice of the observation which will follow :

“The old resident in intertropical countries very constantly suffers most severely during the prevalence of rains, and declares this to be the most sickly period. The more recently arrived from Europe, on the contrary, are principally affected in the dry, hot season, usually passing through the wet season without suffering much from disease. The native Africans themselves fall sick in the rainy season, like the old resident European, and in the dry season, feel themselves healthy. Accordingly, while the whites were nearly all affected with fever at the confluence of the Tchadda and Nigér, the natives were perfectly well. But previously, when the vessel was wooding and watering during the rainy season (July, 1841) at Grand Bassa and Cape Palmas, many of the Africans were affected, whilst the Europeans, generally, enjoyed good health.”

From the above statement of facts, should it not be the duty of physicians on board her Majesty's vessels to recommend their captains to send the coloured men on shore when necessary during the dry season, and the white men during the rainy season, as by that means fever might be kept out of the vessel, and many valuable lives saved. Our author next proceeds to discuss the cause of fever. We must allow him to speak in his own words. After having slightly touched on the nature of fever, &c. &c., he says :

“Fever, in the more temperate latitudes of the earth, being more prevalent in marshy districts than elsewhere, the idea of a poison, the efficient cause of the disease, engendered in such districts, has long had possession of men's minds ; and a *miasm* or *malaria* having been imagined, all became easy after this : as a man becomes affected in a certain determinate way by a dose of laudanum, so does he become affected in an other determinate way by a dose of marsh miasm or malaria. To pass by the inability in which all have hitherto found themselves to show any of this miasm or malaria, or to demonstrate its existence by any chemical or sensible test, many have been sadly puzzled to find themselves surrounded by fever of the worst character, in situations and circumstances very different from those in which malaria is by general consent believed to be especially engendered.

“The air of the atmosphere of any one country would not appear to differ sensibly in its chemical composition from that of any other country. It is identical in the wilds of Africa, and in the crowded streets of London ; at the level of the sea, and at an elevation of sixteen or seventeen thousand feet above the earth's surface. There are other elements or conditions, however, which, though they are not taken into the chemical reckoning, ought to arrest attention, the rather as they are fluctuating, and therefore the more likely to be connected

with the varying effects which the climate of every parallel of latitude and of every spot on the earth's surface has upon the health of man. The varying elements or conditions of the atmosphere are its temperature, its moisture, and its electricity. There is also another agency which appears to me to have attracted less attention generally than it merits, in the investigation of the causes of fever in tropical countries; this is what has been spoken of under the title of the solar influence".

He next attacks with vigour those authors who think they have satisfactorily accounted for the origin of fever by malaria. It is best to use his own words:

"The majority of writers, however, seem to have a comfortable persuasion that they have satisfactorily accounted for the origin of fever, when they have invoked the agency of the effluvium or miasm entitled malaria, the product of the decomposition of vegetable matters under the influence of heat and moisture. To such lengths has this theory gone, that so respectable an authority as Dr. Macculloch (*Essay on Malaria*, p. 31) may be found speaking of a pond constructed to hold a few gold fishes, and a meandering stream ornamented with bulrushes and water lilies, as common sources of disease and death, and that in a country so temperate as England. Nevertheless, Dr. Macculloch may be found informing us that Singapore, which lies under the direct rays of a vertical sun, and abounds with swamps and jungle, and where all the conditions to the production of miasm or malaria exist in perfection, enjoys great immunity from fever. This single fact seems sufficient to overthrow all preconceived ideas of malaria; and, to use Dr. Macculloch's own words, makes us suspicious of all the information upon which the reasonings in regard to its influence have been founded."

The next person whom he attacks is Dr. Thornton, who being a great disciple of the doctrine of malaria, is somewhat puzzled to give a reason why fever is more prevalent during the months of August and September, when the Hoogly is overflown, than during the months of May and June, when the river is low, and the banks exposed to the excessive heat of the sun. He further states that Dr. Robert Armstrong has penetrated the swamps of Batavia and Judnegut, and also at Jamaica entered the mangrove swamps at sun-rise in quest of the agent malaria, and examined the air and water, all without success. We need not go on to enumerate names of high authority who support the doctrine of malaria; but we must confess that Dr. Pritchett does not allow sufficient influence to this poison, as there is no doubt that such exists, though observers have not yet been able to prove it chemically; yet there are sufficient facts to prove its existence; for instance, the extreme term of life of those who inhabit the

districts where it prevails seldom exceeds forty to fifty ; that at Petersburg in Virginia, a native and permanent inhabitant seldom arrives at the age of twenty-eight. We would agree with Dr. Pritchett if he said that there must be some other exciting cause besides malaria, but we cannot go so far as he does: after stating that Dr. Wilson, inspector of naval hospitals and fleets, says that South America, abounding in marshes and lagoons, most part situated within the tropics, enjoys a singular immunity from endemial disease, he observes, that—

“ With the continent of Southern America before us, we seem to have an assurance that vegetable matter, in a state of decomposition under the influence of a high temperature, is not the chief agency that produces the fever which prevails so fatally in certain intertropical countries. Nay, I conceive that we are warranted in going further, and in saying, that the doctrine of miasm or malaria is a mere hypothesis, which, from having been cherished over-fondly, has been prejudicial much rather than useful.”

This certainly is a strong fact against malaria, but then we may account for it that the other necessary excitants are absent. He also supports his argument by the fact that our troops have been stationed on elevated situations, without vegetation, and marshes, viz., Crawford's Island, on the Western Coast of Africa, and yet the mortality was nearly equal to that of Sierra Leone, but he forgets that there are well-established facts, where mountainous districts have almost been depopulated, whenever the wind was blowing over morasses at some distance. We will cite one instance : Orlandi mentions, that when the south wind passed over some stagnant waters, it infected the air of the hills. These heights became salubrious only when Pope Paul V. had caused the marshes to be drained. May not the malaria have been carried to those elevated situations which Dr. Pritchett has brought forward to support his opinion, and in our opinion it will be confirmed by further observation. We highly approve of the manner he has treated the idea of attributing it to various local and accidental phenomena, such as volcanic eruption, &c. &c., though he must grant that Dr. Webster, of America, has brought forward a number of facts which give some appearance of probability to those ideas, and it is the received opinion amongst the inhabitants of volcanic countries, such as Naples, that sulphur fumes and acid emanations are the cause of this disease. This theory cannot be even supported. We will quote his own words upon the theory of animalcules :

“With regard to the theory of animalcules, as the cause of epidemic and epidemical febrile diseases, a theory which has of late acquired some advocates, I have little to say. The subject has been carefully investigated by some of the best microscopic observers, especially by Henle, in Germany, but nothing has been discovered. The accomplished observer just named has never succeeded in catching any of these malignant infusories within the field of his microscope. It has also been very properly observed by Mr. Farr, that the hypothesis of animalcules does not satisfactorily explain the cause of epidemics, inasmuch as it does not show why the animalcules should be created at distant times, or how, being produced, they should have any power to occasion such effects as are ascribed to them. For my own part, I can conceive it possible that animalcules should co-exist with a particular epidemic, and yet have nothing whatever to do with the production of the disease; they might arise under the influence of the same agent as the epidemic itself. When we see epidemics, such as plague, cholera, and small-pox, spreading from hot climates to cold, and from cold to hot, as it is shewn by the history of the world that they do, we must needs regard them as connected with some far pervading physical cause, with the nature of which we are unacquainted. That some particular constitution of atmosphere is necessary to the prevalence of every disease, is evident from the fact, that certain diseases always exist sporadically, more or less, and that it is only periodically, that they greatly prevail or become epidemical.”

The theories of carbonic acid gas, and that of carbonated hydrogen, are slightly mentioned by the author. He says, that if either of these were the exciting cause, that the inhabitants of Franzensbad, in Austria, and that the men working in mines, would suffer frequently from the disease, which is not the case. The latest theory which he mentions, is one that has very lately been put before the medical public by Professor Daniel, of King's College,—that of sulphureted hydrogen being the cause of intertropical fever. In April, 1840, having examined some water brought from the rivers of the Western coast of Africa, he detected this gas; it was immediately concluded that nothing more was wanting to explain the cause of the insalubrity of the climate. We will now quote our author, as he completely overthrows this theory by well founded facts:

“In obedience to directions received from the inspector general of naval hospitals and fleets, on the Wilberforce reaching the coast of Africa, and also in proceeding up, and on our way down the Niger, the most rigid and careful investigation of the waters was instituted every hour, the tests used being sulphate of copper, nitrate of silver, solution of arsenic, ferrocyanate of potass, carbonate of lead, tartrate of antimony, and lastly, the terchloride of gold, but in no instance

was the slightest trace of sulphuretted hydrogen detected. There can be no doubt, therefore, that the sulphuretted hydrogen found by Professor Daniell arose from the decomposition of the water in the course of its transmission to England from the coast of Africa; nor is it necessary to go to the mouths of the Niger and Gambia to procure water, which, after being kept five or six weeks, shall yield sulphuretted hydrogen gas abundantly; the water of the Thames may be tried with an assurance of having by and by a very satisfactory demonstration of this fact.

"But even if sulphuretted hydrogen were evolved from the waters of the west coast of Africa, would this explain the fevers which there prevail? All the world knows that every chemical lecturer produces sulphuretted hydrogen gas in abundance in his lecture-room, and that its odour is sometimes disseminated for the edification of the audience, but never with the effect of inducing African fever among them. In the Wilberforce, an evolution of sulphuretted hydrogen ensued to a very disagreeable extent on several occasions, in consequence of the bursting of some cases of preserved meats; but in no instance did any disease take place from this cause; when the stench was excessive, a slight faintness, followed by nausea, was complained of for a moment; but these symptoms speedily passed off on coming into the open air, and no ulterior ill effect ensued. An occurrence of this kind took place at St. Antonia, Cape de Verds, on the 17th of June, 1841, when the heat was very intense, and the stench so intolerable as to drive every one from the immediate neighbourhood whence the canisters were removed and thrown overboard."

Our author, having discussed almost all the theories that have been brought forward as causes of endemial fever, says:

"In taking a retrospective view of the African remittent fever, which prevailed in the Wilberforce, in common with the other vessels of the Niger expedition, it is somewhat remarkable, that although we entered the Niger on the 15th of August, anchoring inside the bar of the Nun, and refitting there till the 20th, when we steamed onwards, it was not till the 4th of September that the first case was put on the sick list."

They were under the impression, that after having passed the Delta they were in a salubrious region, and he describes well their feelings of security and the beauty of the scenery, when suddenly, and when they least expected it, the dreadful disease seized on them. The weather was fine until they arrived at Lodali, which they did on the 2nd of September. The thermometer was never above 85°, nor below 70°, but then it became intensely hot. He says that

"The climate of the western coast of Africa differs from that of the West Indies, and most other hot countries, in its extreme humi-

dity ; the atmosphere is literally for the major part nearly saturated with moisture, a fact which is shewn by the hygrometer ; and which is speedily learned from experience by all who visit the country in the rapid destruction of clothing, and the constant formation of mildew on almost every thing when laid by for a single day, in the course of which boots, shoes, woollens, &c., become covered with a complete white coating of this vegetable substance.

“ This excessively moist condition of the air is temporarily abated by the condensation of its vapour into rain, when the breathing becomes more free, and a sense of renovation is experienced, that is quite refreshing.”

He then shews that the body becomes surcharged with carbonic acid in very moist climates, and that several of the emunctory organs become deranged, causing constitutional derangement, which in tropical climates becomes manifest in the production of remittent fevers, which he considers as an effort of nature to restore the normal condition in the various constituents of the frame, which have become deranged by certain atmospherical conditions ; he brings forward cases where the atmosphere in the vessels was kept dry under deck, and the crews suffered little from fever. Our author having sufficiently proved that moisture is a predisposing cause to fever, states in full his own theory, which we will give :

“ The system, from exposure to a hot moist atmosphere for any length of time, may become to a certain extent predisposed to the advances of fever, or be rendered extremely liable to be acted on by any of the exciting causes of the disease, which appear to be various. That which was observed as pre-eminent in the present expedition, was solar influence ; but I believe that the depressing passions, fatigue, bad or insufficient food, inadequate clothing, and drunkenness, are upon occasion effectual means of immediately inducing as well as predisposing to the disease.

“ The physical agency which presides over and regulates the secretions is in all probability electricity, emanating from, and being subordinate to, the nervous system. The electrical fluid, however, is influenced by certain conditions of the atmosphere, which alter its state, and modify its distribution, causing it in one instance to be in excess, in another, to be deficient.

“ This invisible agency may probably be considered as one of the means employed by nature for eliciting and sustaining life with its various attributes ; it may be viewed as a power, a force, conveyed by the nerves to the different structures, and under ordinary circumstances supporting these in their integrity, and enabling them to perform the processes which pertain to them severally.

“ All substances are supposed naturally and usually to contain both the positive and negative kinds of electricity in a state of affinity

and equilibrium ; any combination of circumstances disturbing this equilibrium overcomes the natural attraction of the two kinds of electricity for each other, and disunites them. Moisture being a conductor of electricity, a separation of the two electricities possessed by the lower strata of the atmosphere, where the degree of humidity is greatest, readily takes place ; and then the air more immediately in contact with the earth is often observed to be in a negative state, a state in which it may be supposed to attract and conduct away the positive electricity of the body, and so produce exhaustion of the nervous system in consequence of its incessant efforts to supply this vital stimulus. An individual subjected under such circumstances to solar influence, almost certainly manifests that peculiar derangement of the system which is known under the name of fever, in the more severe cases of which there is an obvious tendency to decomposition among the constituent elements of the body, even before the extinction of life : the vital laws are here superseded, the ordinary physical laws come into play. If this goes beyond a certain very limited extent, life ceases, and the body is resolved into its constituent elements in new forms of combination."

He then brings forward proofs in support of his theory. We will only mention one or two. Dr. Robertson, surgeon of the Weasel, in the river Gambia,

"States, that when feeling the pulse of a boy who was dying of fever, at the moment the lad expired, he received a shock, as though electrified, attended by a disagreeable sensation, not easily to be expressed, and quickly followed by a prostration of both strength and spirits, so that he had almost fainted before he reached his cabin. Dr. Robinson afterwards suffered a most severe attack of fever."

Again, the author's own experiment :

"In some imperfect experiments made by myself on persons affected with fever I observed that on making them take hold of the wires communicating with a needle, delicately suspended in a coil of silver wire, a considerable variation of the needle immediately ensued ; but I regret to say, that in consequence of the great number of patients I had to attend to at this time, and the numerous occupations which devolved upon me, as well as from being without the proper means of isolation, I was unable to institute experiments sufficiently satisfactory to warrant me in giving them in detail."

Having given very fully the opinions of our author, we cannot pass them over without a few words. We cannot understand why he has brought in electricity as an agent in causing fever, an agent of which we may say, nothing is certainly known. Dr. Wilson Philip has spent a long life in endeavouring to show its power over the animal economy, but with comparatively little success—why then was not our

author content with polar influence, in which, in our opinion, he has sufficient proofs to bear him out? that, with humidity and fatigue, will sufficiently account for those anti-tropical diseases; but we must give our author credit for originality. He makes some valuable remarks upon acclimatization, which we would recommend to our readers. We must now give some account of the symptoms; we will allow Dr. Pritchett to speak for himself.

“The symptoms of the febrile disease were irregular, and appeared to depend very greatly on the constitution of the individual attacked, and on the nature of the exposure to which he had been subjected. The disease frequently advanced at first very insidiously, the symptoms of derangement being greatly diminished, if not altogether absent, in the morning, but returning greatly increased in violence as evening advanced, so that many, who in the early part of the day made little or no complaint, were labouring under a considerable degree of febrile excitement before night; at its commencement, the disease sometimes partook of the intermittent type, it then gradually became remittent, and occasionally merged very nearly into the continued form; or otherwise, it was sometimes evidently remittent at its commencement, and changed into the intermittent type as it approached its termination, and the patient became convalescent. Many were merely indisposed for several days, before more decided indications of serious disease made their appearance. The usual complaint then made was of feelings of debility, and want of appetite, with derangement of the stomach and bowels—either constipation, or diarrhœa. Then came a severe splitting headach, and intense heat of skin, with pain in the chest, a dull uneasy sense of oppression there, and sometimes a slight cough, followed by nausea, and vomiting of bilious matter. In some cases, even at a very early period, the countenance looked livid or dusky, and there was a dark areola around the eyes. The pulse was generally found quick and small; it was seldom full and bounding, or such as would have warranted depletion; in the course of the disease, the pulse frequently became slow, with remarkable intermissions. There was also at times partial retention of urine, requiring the use of the catheter. Generally on the third day, the symptoms were greatly increased in violence, the speech becoming altered and faltering, and the thirst being most intense. On feeling the pulse of the patient at this time, a hot uneasy sensation remained in the fingers, which could only be effectually removed by washing.”

These were the general symptoms, but some were attacked suddenly, though in perfect health; there was vomiting of bilious matter, sometimes yellow, and others dark green. If we call to mind the symptoms of the remittent fevers that have occurred at Cadiz, Gibraltar, Sicily, Sardinia, East and West Indies, United States of America,

Sierra Leone, and the Bights of Benin and Biaffra, we must remark the great similarity, though sometimes one symptom has been more prominent, for instance, in the one now treating of the black vomit was wanting, though the yellow skin was present. We might enumerate more differences, but we are afraid of drawing this out to too great a length. With respect to the morbid appearances, he says :

“ An inflammatory and congested state in some portion of the stomach, either about the cardiac or pyloric orifice, and an appearance of the same kind about the cœcum, extending upwards to the ileum, and down to the colon, were the principal morbid changes encountered. Some enlargement, and probably commencing ulceration of Peyer's glands, were also commonly enough observed. The gall bladder was usually distended, and its duct often seemed obstructed. The organ, however, that deviated in the greatest degree from the healthy condition was the spleen, which was commonly enlarged and pulpy. Such is the morbid anatomy which I found in connexion with this insidious and dangerous malady, which almost makes good the old maxim, ‘*medicina non agit in cadavere.*’ ”

To these facts we cannot attach much importance, as he was only able to examine two cases.

We now arrive at the treatment, of which Dr. Pritchett says :

“ In dealing with the African fever, I soon discovered that the efforts of the practitioner were best directed when they were used simply in assisting nature to overcome the disease.”

He says he first tried blood-letting, cold affusion, and warm bathing; these he quickly gave up. We wonder he did not recollect the remark of Dr. Boyle, of Sierra Leone, who says that he scarcely ever saw a patient recover after bleeding; he then mentions the different modes of treatment he used, and the success he has had with each, and sums up with the following :

“ With regard to specifics in the febris Africana, then, it may be very safely said that at present we have none; for mercury, which has hitherto being viewed by many as the sheet-anchor, has entirely failed in the river Niger; blood-letting has been declared highly injurious; quinine has equally been found abortive in the early stages; and as for the drops of Dr. Warbourg (probably composed of morphia and quinine), they, too, have proved a total failure. The practitioner is therefore left to the resources which sound medical principles, good sense, and experience, may suggest, and the symptoms of the disease require; probably the best and safest practice of all will be found to consist in that which simply endeavours to assist nature in those efforts

that tend to the patient's improvement, and to check those that tend to his destruction ; by attempting to take the enemy by storm, we should too frequently, I fear, do more harm than good."

This is a complete blow to Dr. Warbourg's specifics, of which Sir A. Halliday, Deputy Inspector-general of Army Hospitals in the West Indies, has said, that, from his success, he thought the secret should be bought, and the discoverer properly rewarded by the country. We see that at present there is no line of treatment which has been attended with marked success ; how could we expect otherwise, as the medical men who were engaged in the expedition have not had sufficient experience, or opportunity to test the different kinds of treatment ? We cannot conclude without taking some notice of the author's remark on prophylaxis. He says :

" As to the best means of warding off the attacks of the African remittent fever, while employed on the coast, which may with great propriety give name to the disease (for it differs somewhat from that of other hot countries), there is no doubt that in addition to ventilation and cleanliness, which are altogether indispensable and primary measures, much stress deserves to be laid on employing the people regularly, short of fatigue ; on keeping up their spirits, and furnishing them with amusements ; on guarding against their exposing themselves to the sun's rays, or the rain ; on supporting the constitution by nutritious food,—in short, by doing every thing that may conduce to maintain the mind and body in a state of high health."

And again :

" Having in the first portion of this work spoken of the influence of moisture in producing disease, it may be supposed that in removing humidity, we do much towards the preservation of health. My own opinion is, that in tropical countries, this point is one which cannot be too strongly insisted upon. In a wet season, with constant rains, to keep a ship dry will probably be found impossible ; a slight approximation only to this result will then be attainable. Stoves placed in different parts of the ship will probably be found the best means of keeping her dry ; in steam vessels, the heated air of the engine-room, as was first practised in the *Wilberforce*, at the suggestion of Capt. Allen, may very advantageously be conveyed to various parts of the holds, &c. With regard to chemical substances, I do not think they will ever be found to answer the object proposed in their employment.

" Great care should at all times be taken to keep the surface of the body as much protected against the more immediate application of the damp chilling air, as is compatible with convenience. At present flannel is the covering generally adopted, but probably an envelope of silk will be found not only more agreeable but also more efficacious for this purpose than any other. Spun silk under-clothing

should, I think, be universally adopted by invalids in all climates ; its cost I fear will prove a barrier to its general adoption ; but to those whose means enable them to make use of this material it will be found from its non-conducting properties, a most valuable, additional means of preserving their health."

We will be excused quoting so largely upon the subject, but our excuse is, that Dr. Pritchett is the first author who has so strenuously recommended protecting the body from damp air, and, as we concur with the Doctor in his idea about humidity, we cannot leave down our pen without recommending the adoption of his advice in all inter-tropical climates.