Present: Dr. P. Smith, Dr. Day, Dr. Graham, Dr. Blair, Dr. Kirkland, Dr. Webb, Dr. Ryan, Mr. Gray, Dr. Rees, Mr. A'Beckett, Dr. Williams, Dr. Martin, Mr. James, Mr. Ellery, Mr. Girdlestone, Mr. Ralph, Mr. Wooldridge, Dr. Jonasson, Dr. Neild, Professor Halford, Dr. McCrea, Mr. Fitzgerald, Mr. Gillbee, Mr. R. Robertson, Dr. Hunt, Dr. Rowan.

Mr. Gibbons was present as a visitor.

The President, Dr. Day, in the chair.

Correspondence.

A circular forwarded by the Baron von Mueller was read, as follows:

"For the completion of an universal work on Australian indigenous plants, it is desirable to obtain additional collections of plants in a pressed and dried state, particularly from districts far inland or recently settled. It is an important aim by these means to trace out the exact geographic limits of the many thousand species which constitute the original vegetation of Australia, and in order also that all observations on their respective utilitarian value, whether for pastoral culture, medical, or industrial purposes, may become recognised and applicable to the widest extent. Moreover, it is necessary to study still further the degrees of variability, to which all kinds of plants are more or less subject, with a final view of circumscribing the exact characteristics of each species. It is to be impressed on those who may feel interested in the promotion of such researches, not to exclude from local collections any plants merely because they are frequent or insignificant. The process of drying plants for permanent collections is simple and easy in the extreme. It needs hardly any explanation beyond perhaps the"
remark that the parcels of paper, containing any recently gathered plants, after a few hours pressure, should be divided into thin sets, and be spread out on a dry or warm place, to facilitate and to speed the exsiccation, and to lessen also the requirement of shifting plants from paper which becomes moist, into dry paper. Small plants should be gathered with their roots, and all not merely in flower but in fruit also, as indeed from the latter generally the main characteristics are derived. Water-weeds, rushes, sedges, mosses, lichens, fungi (and on the sea coast also algae), even if ever so small, should not be passed in collecting. Transits are best effected early after the preparation of the specimens, in small parcels closely packed, by successive mails. Whoever wishes to become scientifically acquainted with the native plants of his vicinity, or of localities otherwise accessible to him, can obtain the specific names, if a duplicate set is retained, in which the specimens are numbered correspondingly to those of the transmitted set. An intimate knowledge of the indigenous vegetation, while it largely indicates climatic and geologic circumstances, tends also to afford an insight not only into the natural vegetative resources of any tract of a country, but also into much of the pastoral or cultural capabilities of the respective localities. Researches of these kinds become, furthermore, the sources of educational works, and unfold to well-trained and intelligent minds pure recreative and healthful pleasures inexpensively everywhere within reach.—Ferd. von Mueller, M. and Ph. D., F.R.S.

"Melbourne, April 1876."

Books Received.

Volume iv. of the "Flora Australiensis," presented by the Baron von Mueller; volume viii. of "Patents and Patentees," presented by the Registrar-General, were acknowledged. Also, a number of books purchased were announced.

"Native Senna."

The Hon. Secretary reported that he had submitted to Baron von Mueller the specimen of "Native Senna" exhibited at a former meeting by Dr. Day. Baron von Mueller had pronounced it an example of the Acacia Myrtifolia, Wildenow, an account of which was to be found in "Flora Australasiensis," vol. ii.

Notice of Motion.

The Hon. Secretary gave notice of the following alteration in the Rules: "That the following be added to the Rules of the Society, viz.:-In Rule 3, after the word 'ordinary,' that the word corresponding be inserted. That in Rule 5, the following sentence be added, after the word 'required:' Candidates for election as corresponding members shall be members of the profession living out of the colony. They shall be legally-qualified medical practitioners in the country where they reside, and the nature of their qualification shall be stated at the time of their nomination. They shall pay an entrance-fee of one guinea, but shall be exempt from the annual
Subscription. In all other particulars they shall be subject to the same conditions as ordinary members.

NEW MEMBERS.

Dr. Nicholson of Benalla, and Mr. W. Barker of Emerald Hill, were elected members.

REPORT OF THE SPECIAL COMMITTEE ON SNAKE-POISONING.

The discussion upon this report was resumed by Professor Halford. He said Dr. McCrea had asked him to account for the difference of results as between his own experiments and those performed by the committee. He found that whereas in his own experiments he had inserted the virus beneath the skin by means of an incision, the committee had mixed the poison with glycerine and water. The glycerine being a very diffusible substance, this mixing would probably facilitate its quicker entrance into the system. At the same time, by the employment of the syringe, it would be thrown in so as to increase the extent of absorbable surface. Unconsciously, then, the committee had done their best to kill the dogs. The ammonia, he need hardly say, was a transient remedy, so that after injecting a dog with ammonia, there was still more poison to be absorbed. It was difficult to say when sufficient ammonia had been administered. This being the case, it was necessary to watch the animal like a human being, for indications as to when the stimulant should be repeated. This had been his practice in his experiments, and it was here he thought where some explanation might be found as to the difference between the several results.

Dr. McCrea brought up the following final report of the committee:

"Since the progress report was sent in, your committee has performed some fresh experiments, chiefly with the view of testing the effects of the intravenous injection of ammonia on dogs which had not been poisoned. In one dog not poisoned by snake venom, death immediately followed the intravenous injection of ammonia. In the case of two dogs (into one of which one drachm of liquid ammonia was injected), both became prostrate, were convulsed, and nearly died. In three others the effects of the ammonia injection were of depressing nature, but the dogs recovered. In several dogs in which ammonia was injected after poisoning by the bite of the snake, or the hypodermic injection of poison, the dogs got up and walked about; but in the great majority of the experiments they showed no signs of revival from the depressing effects of snake poison after the injection of ammonia. In these experiments chloroform was administered till the heart's action became feeble. Ammonia was then injected into the jugular vein. The effect was stimulating to a slight extent, but was quite evanescent, and had no permanent effect in retarding or preventing death.—W. McCrea, Chairman."
It would be remembered, he said, at the meeting held in March of last year, some reflections were cast upon those of the profession who regarded as in any way reliable the conclusions arrived at by the Indian Commission. The reports furnished by the profession in Victoria were greatly in favour of the intravenous injection of ammonia as a remedy for snake-bite. This testimony was offered on one hand, and the results of the Indian Commission experiments were pointed to on the other. Up to that time he was favourably impressed with the value of the ammonia by this mode, but he nevertheless thought the only fair mode of further considering the question was to repeat the experiments. The result, as he need hardly remind the Society, was the appointment of the committee whose report was now under discussion. This report had confirmed that of the Indian Commission. The experiments of the committee had included four, in which Professor Halford himself had injected ammonia—

Professor Halford.—And in these the ammonia, in the opinion both of Dr. Kirkland and Dr. Smith, was distinctly beneficial, although the fact was not stated in the report.

Dr. McCrea.—A temporary benefit had also been observed in other dogs experimented upon by the committee. The aspect of the question was this: Professor Halford inoculated dogs with snake-virus—he injected ammonia, and they recovered; the Indian Commission injected snake-poison by means of the hypodermic syringe—they followed it up by the injection of ammonia, and the dogs died. The committee pursued a like course, with like results. What, then, was the explanation of this difference? A general reply appeared to be supplied by common agreement, that it was a question of quantity. Given the introduction of a certain quantity of poison into the system, and death followed inevitably. Now, in the experiments of the committee, definite quantities of poison were introduced; in those of Professor Halford very indefinite quantities were used. Knowing the quantity of poison which would kill, were we not justified in concluding that when death did not follow, a lethal quantity had not been used? We were told that in the case of human beings, recovery after snake-bite followed the injection of ammonia, but in none of such cases was there record of the exact quantity received into the system, for the simple reason that it was impossible to say.

Professor Halford.—Ammonia was not, and never had been declared to be an antidote. It was only a mode of treatment recommended to the profession.

Dr. McCrea.—It was on record that a large quantity of poison would certainly kill. Professor Halford himself admitted that a large quantity would infallibly kill. For example, two dogs, weighing respectively 51 and 40 pounds, were bitten by two vigorous tiger-snakes. In the 51 pound dog, ammonia was injected twice, in the other there was no ammonia used. Both dogs recovered. Several days afterwards the 51 pound dog had $\frac{6}{29}$ of a grain
of snake-virus inserted under the skin; the other dog had similarly $\frac{5}{20}$ of a grain. The larger dog was injected twice with ammonia, and died; the other dog was not injected, and he recovered. Here, it would be seen, although ammonia was twice used, the quantity of snake-poison, being a lethal one, killed. The other dog, not having received a lethal quantity, recovered, for all that no ammonia was employed. And yet there was only the twentieth of a grain of difference. Such an example should, he thought, go a long way towards offering a sufficient explanation of why the ammonia treatment was useless. A few days afterwards this dog was bitten and died; he had obviously received more poison than $\frac{5}{20}$ of a grain. It should be remembered, too, that human beings were often bitten through their clothes, a condition which would necessarily render the bite uncertain, and would account for many recoveries attributed to the use of ammonia. He would ask, therefore, if, after reading the account of these experiments, the use of ammonia by injection was of any value whatever? The Society had before it a serious responsibility. It had to decide between the cases reported to Professor Halford, and the experiments now recorded by the committee. Would they after this continue to recommend the practice? For his part he considered that now to make use of the ammonia injection, would be trifling with human life. He hoped the conclusion arrived at, therefore, would be distinct and clear. The experiments of the committee had verified those of the Indian Commission, and could not be gainsaid. But it would, no doubt, be expected of the Society that it should recommend something in the way of a remedy, and he would point out the necessity of employing the knife and the ligature in all cases, and this course, at any rate, the Society ought to recommend.

Dr. Blair pointed out that the potency of the bite of a snake depended both upon the condition of the snake and the condition of the person bitten. It was a question of quantity. He had been upon a committee fifteen years ago to investigate the value of Underwood's so-called antidote, and it was clear that the experiments shown by this man to illustrate the certainty of his specific were of no value whatever. The bites were made by snakes whose poison had been exhausted by previous bites. But the practice of intravenous injection of ammonia was at least two hundred years old, and its futility had been demonstrated long ago. Some of the so-called cases of snake-bite reported were not cases of snake-bite at all.

Mr. Fitzgerald had employed the intra-venous injection of ammonia, but not in snake-poisoning. He was, however, quite satisfied of its value. It was an ungracious mode of lessening the importance of Professor Halford's adoption of the injection of ammonia, to endeavour to show that he had only followed in the steps of those who had preceded him in the practice. He had determined the quantity to be employed, and had altogether put the process on a much more definite basis than it had ever occupied.
before. He (Mr. F.) had used the injection eight times, once in a case of embolism, and with the most markedly good results. In another case, after amputation of the thigh, where the patient was moribund, the restoration was magical. Speaking by analogy, he should think it a most appropriate remedy for snake-bite. Certainly, for collapse from other causes, it was just what was indicated, and it would reflect no credit upon the Society to declare adversely to it.

Dr. Rees did not think the conclusions of the committee should be regarded as final. It was probable that much larger doses of poison were injected by the syringe than in a bite. It was therefore a question of dose. Then as to the effect of other poisons on dogs. It was well known that dogs could take large quantities of atropine with impunity. He related a case in which he had employed beneficially the intra-venous injection of ammonia in a case of uræmia after scarlet fever. The injection of the ammonia was followed by epileptiform convulsions, and the child died afterwards of pneumonia, but the efficacy of the ammonia treatment was signally illustrated. He could not understand the objection raised to the method. We administered other remedies by means of intra-venous injection, and why not ammonia?

The President, speaking of the use of glycerine in diluting the virus, referred to some experiments alluded to in a recent number of the Academy, in which its administration to a cat had been followed by a discharge of the colouring matter of the blood through the kidneys. It appeared to him that one physiological property of ammonia had been overlooked, namely, its action upon the sympathetic nerve. He had communicated this view some years ago to the Society, and it would be found recorded in the Journal of November 1871. The action of snake-venom, he had then asserted, was directly upon the sympathetic nerve, causing an abnormal contraction of the capillaries, putting a stop to the oxygenation of the blood. The effect of ammonia was exactly the opposite of this. It produced a condition of paralysis in these vessels, and so relaxed them. This explanation adopted, the rapid effect observed was cleared of any obscurity. There was at once the rapid admission of blood into vessels, just previously empty of it.

Dr. Webb would wish to know when was the proper time for the administration of ammonia in snake-bite, for a person bitten would apparently recover, and then on a sudden fatal symptoms would show themselves. He had known a case in which there was the most perfect consciousness until within two minutes of death. In another the patient went on seemingly quite satisfactorily for two days, and then death suddenly happened. In this latter case the symptoms coincided with those observed in dogs.

Dr. P. Smith thought that with regard to the employment of glycerine, it rather retarded than accelerated the effect of the poison.

Dr. Martin had no experience in snake-poisoning, but as to the statement that some of the poison was taken up by the clothing, he believed the snake made the puncture before injecting the virus.
He did not for one moment question the reliability of the experiments performed by the committee, but he thought he was equally entitled to retain his belief in the value of the cases in which the ammonia had been used in the human subject. Such being the case, there was no reason why we should abandon its employment. The testimony in favour of its advantageous use was abundant, and, as he thought, irrefutable. He could not set aside the instances which on every side presented themselves to us. Whatever the Medical Society might say to the contrary, the public would continue to retain its faith in the value of the remedy. For his own part, if he himself were bitten by a snake he would insist upon being injected with ammonia.

Professor Halford regretted that those who had had actual experience in the intra-venous injection of ammonia in snake-poisoning, were not present to offer their personal testimony in its favour. He felt, however, that it would be a great injustice to them to doubt their written assurance, and he should still hold to his belief in the value of their statements, Dr. McCrea's forebodings to the contrary notwithstanding. So far at any rate the ammonia was the best remedy offered. He had never killed a dog with ammonia. When he began to use it, it was considered a poison as potent as strychnine, and he had therefore commenced with very small doses. He had given one minim, then two minims, five minims, and so on up to a drachm, and never with injurious results. It was illogical, and therefore unreasonable to talk about "trifling with human life" because one set of experiments did not tally with another set. He had always, however, recommended excision, but he thought the ligature dangerous, both because of the risk of phacelus, and in that as soon as it was relaxed it let in the poison. He had received testimony of the value of ammonia by the intra-venous method in bad cases of scarlet fever, not less conclusive than those of snake-bite. He thought, therefore, that ammonia was not the useless and foolish thing some persons had endeavoured to make it out to be. Indeed, we were only just beginning to understand it. He had read in the New York Medical Record a case of poisonous spider-bite, in which the injection of ammonia had been followed by strikingly beneficial results. The explanation of the physiological action of the snake-poison, in that it caused, by its irritant qualities, contraction of the capillaries, was probably the correct one, and that the ammonia relaxed this spasm was also probable. This condition was occasioned by its primary effect upon the depressor nerve of the heart. As to the time at which the ammonia should be used, he would inject as soon as ever the symptoms showed themselves, and repeat according to the indications. In Dr. Jackson's case the ammonia was repeated five times. From all the cases read, he believed it could never be said what was and what was not a fatal dose of snake-poison. We could not say, save by the result, so that we ought to inject on the first certain evidence that the poison was circulating in the system. It was true we had complications of alcoholism, but it was easy to differ-
entiate these. The symptoms of snake-poisoning were very insidious. Patients died just at the time when they were to all appearance recovering. He was willing to accept any reasonable suggestion, and if he were convinced of the valuelessness of the treatment, he would at once advise the profession to give it up. So far, he had heard nothing really adverse to its value, and he did not think, even if the Society declared against it, the profession would abandon it.

On the motion of Mr. Girdlestone, the discussion was adjourned to the 17th.

WEDNESDAY, MAY 17, 1876.

ADJOURNED ORDINARY MEETING.

(117 Collins Street East.)

Present: Dr. Blair, Mr. Ralph, Dr. Neild, Professor Halford, Mr. Wooldridge, Mr. Rudall, Dr. Day, Dr. Jonasson, Mr. Gray, Dr. Sibbey, Dr. McMillan, Dr. Ryan, Mr. Gillbee, Dr. Haig, Mr. Girdlestone, Dr. P. Smith, Dr. Rees, Mr. James, Dr. Martin, Dr. Bowen, Dr. McCrea.

The President, Dr. Day, in the chair.

EXHIBITS.

The President exhibited a sample of urine several months old, in which there was not the least trace of decomposition, in consequence of its having been mixed with acetic acid.

Mr. Rudall exhibited some tumours taken from the mammae of a bitch, calcified, if not ossified, so that it required the saw in order to make a section of them. Under the microscope one showed cartilage, another cellular and fibrous tissue, the tumour being, in fact, mixed.

RESUMPTION OF THE DISCUSSION ON THE REPORT OF THE SPECIAL COMMITTEE ON SNAKE-POISONING.

Professor Halford, after offering some comments upon the supplementary report of the committee, referred again to Dr. McCrea's observation, that to continue the use of the intra-venous injection of ammonia was "to trifle with human life." The truth was that the experiments had gone beyond dogs, and we had evidence much more conclusive than they could afford. He could not but think that the committee had gone out of their way to bring into disrepute a mode of treatment which a large measure of testimony showed to be most valuable.

Mr. Girdlestone did not think the committee had, in any degree, travelled out of their way in dealing with the question. The report was entirely limited to facts. If it was desired that the committee should give an opinion upon those facts, this could be done. At present, however, we had only the facts to deal with, and the facts
were those of snake-poisoning, and it was inexpedient to refer to
the use of ammonia in the treatment of any other form of collapse.
As to the alleged difference in the effect of the ammonia upon
different dogs, that mattered little or nothing, since they died sooner
or later. It was an individual opinion, which did not come before
the committee. Those who had taken part in the discussion
appeared to be divided into two classes, one being inclined to the
opinion that ammonia being injected into dogs was valueless; but
that as the symptoms of snake-poisoning in dogs was different from
those in men, no conclusion could be drawn from this circumstance.
Another section said that the experiments of the committee were
inconclusive, in that the mode of poisoning was different from actual
bites. Then we were told that glycerine diffused the poison more
rapidly. Its effect upon the urine of cats was brought forward to
show that it necessarily modified the effect of the snake-virus when
mixed with it. These he thought were somewhat eccentric views,
for how was it possible to inject such small quantities of poison
without diluting it in some way? Something was required to take
it up, and glycerine and water seemed to him to be the least
objectionable of all the menstrua which could be used. A very small
quantity was used, and he did not think the effect of the poison was
thereby modified in the least. Some of the dilutions were made
with water only, and the effect was just the same. Comparing the
cases in which glycerine had been used with those in which it had
not, he was of opinion that it rather retarded than accelerated the
effect. The experiments included 14 bites and 49 injections. Out
of the 14 bites, three died in an hour, and only the same number
out of the 49 died in that time, so that it would seem when bites
acted fatally, they did so more quickly than injections. In the
experiments by bites performed by Dr. Dempster at Beechworth, the
ammonia failed. It was also known that snake-virus had been
mixed with all sorts of re-agents, but without affecting its activity
in any degree. This truth was confirmed by the committee, who
found that although the re-agents a little retarded the action of the
poison, they did not otherwise affect it. The nozzle of a syringe
too might be different from the fang of a snake, but the difference
was of that immaterial sort which left the result the same. The
syringe conveyed the whole of the poison into the areolar tissue,
while the fang of the snake left some in the skin, a portion also
escaping at the gum. The most of it, however, found its way into
the areolar tissue from the point of the fang, so that it would be
seen there was no substantial difference between the syringe and the
bite; the advantage of the syringe being that we could say exactly
how much was injected. Dr. Rees had objected that the doses of
poison were unduly large, but he (Mr. G.) did not think they were
larger than a snake would eject at one bite. He had found that
half a grain was a fatal dose, but most snakes gave out more than a
grain, some nearly four grains. A sudden bite would leave seven-
tenths of a grain, and that from one fang. It could not therefore
be rightly said that the doses given were large. As to the symptoms
in dogs being different from those in men, he thought the symptoms so nearly resembled those in men, that they might be considered identical. A comparison with them, severally, certainly pointed to such a conclusion. Especially he had found that the dogs after the first bad symptoms recovered for a while and then grew worse, and this was what took place in the human subject. In short, the symptoms were almost identical. He had been struck by the difference in the cases of snake-bite furnished to Professor Halford, some having been partially comatose and not relieved by the ammonia, others very comatose and benefited. He therefore questioned where this extremely comatose condition had been so immediately relieved, whether the person had been bitten at all, whether in fact the symptoms were not due to alcohol. In dogs there was little or no coma, save just before death.

The President explained that in what he said concerning the action of glycerine, he had not at all meant to say that its use as a diluent of the virus had affected its activity.

Professor Halford had no objection to make to the use of glycerine, but Dr. McCrea had asked him how he explained the difference between his own results and the results obtained by the committee, and he had said that he thought probably the poison was distributed over a larger surface, and that the glycerine had helped the distribution. In fact, he himself had frequently injected glycerine into the veins of dogs. He accepted the report of the committee, but he retained his belief in the sufficiency of his own experiments, and he relinquished nothing of his confidence in the good faith of those gentlemen in the country, who had furnished him with so many convincing proofs of the value of the ammonia injection. He complained of the absence of fairness in the remarks of Mr. Girdlestone, who did not seem to wish to remember that he (Professor Halford) had pointed out the need of great care to be observed in cases where the symptoms were apparently relieved. He also, as well as Mr. Girdlestone, had noted the greater readiness with which the comatose cases were relieved. So also he had drawn attention to the fact so strenuously emphasised by Mr. Weir Mitchell, that no re-agent mixed with the virus had any effect in altering its activity. The assertion that the intra-venous injection of ammonia was "a trifling with human life," had no proof to warrant it. In the scores of cases in which it had been used, the simple fact remained that nobody was killed. Of the reliability of most of the cases furnished to him, he had no sort of doubt, and in all of them, there was coma; in fact coma was a symptom of snake-bite all the world over. It was easy, among other objections, to say that the persons bitten had been bitten by non-poisonous snakes, but in most of them the marks of the fangs were found; moreover, the number of non-poisonous snakes in Australia was very few.

Dr. McCrea disclaimed any disbelief of the statements made by the country practitioners. He accepted all their statements in good.
Dr. Webb on The Ammonia Treatment.

faith. He only claimed to make deductions different from those they had made. Moreover, some cases had terminated fatally, and some had recovered so rapidly that it was open to doubt as to whether they had been bitten at all. They were deceived as he himself, he regretted to say, had been deceived. He regarded it as a source of grave apprehension that those who had to treat cases of snake-bite would trust to ammonia. For his own part, if he did not excise the part, he should consider himself chargeable with manslaughter.

Mr. Girdlestone also did not wish to cast any slur upon the country practitioners, but there could be no doubt they had trusted too implicitly in ammonia. It should never be forgotten, too, that the operation of intra-venous injection itself was a dangerous one. He knew of one case at least in which there had been sloughing of the brachial artery, which had to be tied.

The question was then put by the President, that the report of the committee be adopted. It was carried unanimously.

Mr. Wooldridge then proposed the following motion:

"That the Special Committee appointed by this Society to investigate the subject of snake-poisoning in dogs, not having in their report expressed any opinion on the treatment of snake-poisoning in man, and there being a wide difference between the symptoms produced by the virus of snakes and various other poisons, as well as between the effects of remedial agents in man and dogs, this Society is of opinion that in cases of snake-bite in the human subject, the intra-venous injection of ammonia is the best remedy at present known."

This was seconded by Dr. Neild, and a conversation ensued as to the propriety of discussing it without notice having been given. It was explained that Mr. Wooldridge at first had intended to propose it as an amendment upon the motion for the adoption of the report, but had consented to put it in the shape of a subsequent motion, and that it would be unfair not to permit him to do so. His right to propose it was thereupon allowed, and he was requested to postpone it until the next meeting, to which he agreed and gave notice accordingly.

THE AMMONIA TREATMENT.

The following communication was addressed by Dr. Webb to the Daily Telegraph, during the period of the discussion of the subject by the Medical Society:

In view of the importance that now attaches to the efficacy or otherwise of the use of the ammonia injection in cases of snake-bite, I trust that the following observations may not be considered out of place.

It must be conceded by all, except the few bigoted to Dr. Halford's theory, that the sub-committee appointed by the Medical Society to investigate the effects of snake-bite upon animals, had one their
work remarkably well. The conclusions they have arrived at are adverse to the propositions propounded by Dr. Halford and his followers, and the arguments of these gentlemen must indeed be weak when, to prove their case, they are forced to fall back on the puerile suggestion, that to the little glycerine mixed with the snake venom, is to be attributed the discrepancies noticeable in the experiments of the sub-committee, as contrasted with those of Dr. Halford.

There is one point, however, to which I think they might have given greater prominence. I refer to the length of the interval that takes place between the cessation of the initial symptoms and the first indications of stupor, and also to the curious phase through which the patient passes during that period. After the stage of depression has subsided, the patient expresses himself as "all right," and as "getting better," and repeats this unvaried formula of words until unconsciousness, the precursor of death, deprives him of speech. This was remarked in the case of Drummond, Stephen, Elliott, Mrs. Falconer, and by myself in the instances of Mr. Masters and Marshall, all of which ended fatally.

I must first explain the symptoms of snake-bite as they occur in the dog, and as they were related by the commission and seen by me in some of the animals subjected to the influence of the virus at the Police Depot.

When a small but fatal dose has been hypodermically injected, the first signs the dog gives of being poisoned, are symptoms of uneasiness, then of depression; he lies on his belly, gets up, and lies down again, licks the spot where the syringe entered, urinates, and then vomits. This vomiting he may repeat two or three times in from ten to fifteen minutes, or perhaps a little longer. These well-marked indications pass off, and the beast appears as lively as ever; he will eat and drink as if he were in the best of health, and it is not in many cases till some twenty or thirty hours have elapsed, that any signs of the drowsiness, pathognomonic of the absorption of the venom, become at all apparent. This drowsiness commences with dulness and lethargy. The animal appears at first rather lazy than inclined to sleep. Gradually the indolence increases; the flies settle on his face, and he seems hardly to possess sufficient energy to brush them off with his paw. The tongue swells, and lolls out. Still sensible, he lies at full length on his side. Much glutinous saliva collects on the lips; the pupils dilate; his stupor increases; he becomes insensible, and without manifesting the slightest pain, passes quietly from a state of coma into death.

Until within a few weeks ago, I, like most people, was under the impression that this virus possessed properties similar to other animal poisons, but the recent experiments have led me to the conclusion that it differs from them in two important particulars. And it is, I think, because these peculiarities have not been dwelt upon, that much confusion has arisen with respect to the action of the venomous agent.

When an animal or a human being has been inoculated with an animal poison, such as vaccine virus, that from a dissecting wound,
or the bite of a rabid animal, after the period of incubation is passed, the various phases appertaining to the specific virus follow each other with extraordinary rapidity, until either death supervenes or a favourable reaction sets in. But with snake-venom almost the converse may be said to be the case. The immediate premonitory symptoms are sickness and vomiting, which pass away, leaving the infected creature in full possession of its reason, and capable of following its accustomed avocations. This state is then followed by drowsiness and inertion, which, increasing into a condition of perfect coma, ends in a total cessation of all vital actions.

It is a well known fact that in other animal poisons (I am not aware of an exception) the absorption of an infinitesimal dose, just enough to influence a single protoplasm, is as dangerous as the absorption of a larger quantity, although the special effects will be regulated by the state of health or idiosyncrasies of the individual. But with snake-venom there is again a totally different state of things. Here the results of the poisoning must be gauged by the quantity of the poison administered. Thus, while such a small portion may be given as will produce sickness, vomiting, great depression, and nothing else, a larger dose will be followed by deferred coma and death, and a still larger by profuse salivation, convulsions, and rapid dissolution. The symptoms of snake-bite in man and in animals are exactly analogous. In fact, they tally far closer than will any two cases of typhoid fever. In the *Australian Medical Journal* of May 1872, there is a letter entitled "The Treatment of Snake-bite," the purport of which was to bring before the profession the injurious effects of alcohol when administered in large doses for snake-bite. This absurd practice is common in digging localities. Whenever anyone is supposed to be affected with snake-venom, an attempt is generally made to dose him with alcohol, so as to render the person if possible perfectly drunk, the impression prevailing that quantities of spirit which, under ordinary circumstances, would prove hurtful, can here be tolerated with impunity. There had come under my notice, when I forwarded this communication to the editor, a fatal case of snake-poisoning where this popular, but hazardous, remedy had been applied freely and sufficiently, so as to mark, as I thought, the indications which I had previously recognised as symptomatic of the system having received the virus. Moreover, the effects of alcohol are not in many particulars very dissimilar to those of snake-venom, and I considered that a drunken person might easily be mistaken for one who had in reality been bitten, and *vice versa*, an error that might be followed by most disastrous consequences, such as had actually happened to a man then under my care, and to whose case I intend hereafter to allude.

With these objects in view I critically analysed the symptoms of the two following cases. I will give them to show how closely they coincide with the symptoms of snake-bite as exhibited by dogs:

The first of these was a Highlander, about forty-nine, and an old colonist. He was admitted by Dr. Lindsey in my absence into the
Creswick Hospital. On his arrival, this man had the appearance of being merely a little drunk, and his story of having been bitten more than two hours before by a snake was consequently disbelieved. He presented none of the signs of snake-bite; there was no vomiting, no paleness, no anxiety, no fainting, nothing in short that could justify medical interference. Consequently Dr. Lindsey declined on the man's bare hiccuppy assertion, or the positive declarations of his friends, to treat him according to the plan suggested by Dr. Halford. So, after ordering the patient to be walked about for two or three hours, at the end of which he seemed nothing the worse for anything but liquor, the doctor came away, previously leaving strict orders that the man was to be closely watched, so as to guard against contingencies, such as fainting, &c. Next morning on my return at about half-past 10, the wardsman in charge having stated the occurrences of the preceding evening, remarked that the patient had suddenly become very drowsy, and asked me to see him at once. I perceived immediately that the man was far beyond human aid, in fact, rapidly sinking. The peculiar stupor, with its imperfect recognition, correct though laboured replies, so different from the heavy stupid insensibility of alcoholism, told plainly from what poison the poor fellow was dying. He sank an hour afterwards. And yet, three hours before I saw him, the patient had dictated to the wardsman the answers to the questions on the card over his bed.

The second case was the one that came before my notice when I was house surgeon to the Amherst Hospital. I give my sworn evidence, as the account written in the journal of May 1872, was recorded from memory, and is not quite so full or so accurate as the statement taken down by the coroner at the inquest. "A man named Marshall was brought into the hospital on Saturday, the 11th, at twenty minutes to 1. He had a ligature round the middle finger of his right hand, where he said he had been bitten. I removed the string, and ordered him to be walked about. At about 1, his speech became indistinct. He complained of precordial distress, and shortly afterwards vomited. He then grew pale, became anxious and unsteady in his gait. I dissected bare a vein, and injected twenty minims of a solution of ammonia, consisting of one part of strong ammonia, to two parts of water. In three minutes he said he felt all right, and walked freely and alone. Half an hour afterwards the distressing symptoms returned with greater intensity, and he fell down in the passage. I injected again in the other arm, only this time twice the quantity I had used before. Whilst so doing, his head fell on his chest, and he became pulseless and cold. In ten seconds he recovered sufficiently to stand erect and walk by himself, and talk rationally. At half-past 8 his depression partly returned, but passed off of its own accord. He slept well all night. Next morning he appeared a little stupid, and had some paralysis of his tongue and eyes. No loss of sensation, breathing heavy. He took food all day. Towards evening he seemed better. I saw him at half-past 2 o'clock a.m. Monday,
the 13th, he answered rationally, and drank some milk that I gave him. At 7 a.m. the wardsman called me, and reported that Marshall had been found that morning dead in his bed, without having manifested another symptom, or given the slightest prediction of his approaching dissolution.

You will observe how closely the latter of these two cases corresponds with the symptoms of snake venom in dogs, when small but fatal doses have been injected. There were the initial indications of vomiting and depression. A temporary recovery to apparent health, followed in succession by drowsiness, stupor—unattended, however, with insensibility—coma, and death. In the other case the initial symptoms certainly were wanting. At the time, I was of the opinion that no vomiting had taken place, but the experience gained at Richmond, inclines me to think that these indications must have been present, as all the other symptoms correspond with those observed in the dogs poisoned at the police barracks. The vomiting and the like was not expected, and consequently was not looked for, and I think that he must have passed through the initial stage before he arrived at the hospital. My account of the case in the *Medical Journal* was not written till some time afterwards, three months or more, and I grounded my paper on the bare facts submitted to me by Dr. Lindsey.

Out of the forty-two included in Dr. Halford's summary, there are recorded only three fatal cases. One of these is the case, the particulars of which I have just furnished, and the other two, reported by Drs. Scott and Bennett respectively, agree in the main with the peculiarities observed by me as to the stages through which the patient passed. And they agree with me respecting my experience of the injection of ammonia, when I applied it. It certainly acted in a most wonderful manner, as some one has described it, "like magic." In a few seconds it raised a man from utter prostration to a state of physical elasticity, but the effects were transient in the extreme. As soon as the heart had ceased to feel the filip the ammonia had given it, the state of depression returned in an aggravated form. In my case, a natural cessation of the urgent initial symptoms precluded all need of more than two applications, but with Dr. Scott, the early indications had subsided before he felt called on to use his syringe, and though the heart responded to the stimulus while the patient was merely in a state of stupor, it totally failed to produce any reaction as soon as coma set in.

It has been said by Dr. Halford that "the injecting a vein is a simple little operation, and can be performed by anyone." But really the proceeding is not quite so simple or free from risk as the professor describes it. As long as none of the ammonia escapes (this may be avoided by the ligature, but it complicates the operation very much), no great harm may occur. It is only recently that the ligature has been suggested, and previous to the adoption of this plan, the injection of ammonia was frequently attended with sloughing to a dangerous degree. To show that these grave
results were not the effects of ignorance and inexperience, I may point to the well-known case of Dr. Dowling's, where we have an accomplished surgeon who allowed a portion of the ammonia to escape, and in consequence sloughing ensued to such an extent that the brachial burst, and it was only by immediately constricting the artery that the life of the patient was saved. Had this accident taken place outside of an hospital, and no assistance been handy, this man must have died.

Great stress is laid by the advocates of Dr. Halford's suggestion upon the fact that it is most useful in snake-bites that occur in the bush, far away from centres of population, and where the services of a medical man are not easily obtained. But it is just in such cases, I contend, that the ammonia injection is likely to be most harmful, as the hypodermic syringe in the hands of an inexperienced person is calculated to be rather an instrument of destruction than one of salvation. In the letter to which I have alluded, mention is made of a patient treated by a surgeon, and subcutaneously injected with this alkaline caustic. Judging from the surrounding circumstances, the patient so treated was merely suffering from the effects of drink, and the results of the injection were of such a nature as to induce death.

From this it will be seen that the only difficulty is not from the inexperienced squatter or the rough-handed bushman using the syringe unsurgically, but from a natural want of knowledge on the part of these people, to be able to discriminate between symptoms outwardly so similar as intoxication and snake-poison. A few words are here advisable as to the strange caustic properties the ammonia possesses.

If a mineral acid be injected under the skin in the same manner that a solution of morphia is used, the integument corresponding to the tissue with which the acid has come directly into contact, is, of course, destroyed. This, together with the structures touched by the caustic, breaks up and comes away, leaving a small circumscribed ulcer, which in a healthy person soon heals, but in the case of ammonia used hypodermically, very different consequences ensue. Not only is a like piece of skin killed, but the intercellular tissue immediately beneath it, and over a space varying from the size of the rim of a teacup to that of a saucer, round the point of injection, liquefies, breaks up, and is discharged in the form of pus. In consequence of this a large abscess remains, and the ulcer, instead of taking on a healthy healing process, for some time afterwards gradually extends. As a proof of my assertion I will mention the instance of the patient who was thus hypodermically treated some fifteen times near Creswick. Those, such as Drs. Steel and Lindsey, who were familiar with the case, will bear me out that the aptest description that can be given of this man, that before he died he was a "living abscess."

With these apparent risks, with the established dangerous consequences that follow the intra-venous injection of ammonia, I think it would be only wise if the Medical Society would carefully con-
sider whether it should stultify the labours of its committee by running counter to their expressed opinion, and proclaiming their adherence to Professor Halford's theory, until at least some more substantial grounds are put forth in favour of its adoption.


Powlett-street, East Melbourne, May 8, 1876.

NOTE ON DISINFECTION.

By C. R. Blackett, M. Pharm. Soc. Eng.

During the last week it has been my duty to consider the various methods which have been suggested for the purpose of preventing the spread of scarlet fever which has visited one of the children of a relative. On reflection, I thought of Dr. Tyndall's interesting and successful experiment on that questio vexata, spontaneous generation, in which he ingeniously made use of glycerine for the purpose of catching the floating germs of microscopic fungi, bacterias, vibrios, et hoc genus omne, with complete success. A detailed account of the illustrious Professor's work has been published in the various scientific journals, and doubtless read by most of the subscribers to the Medical Journal, so that a very brief allusion to the experiments is all that is necessary. Dr. Tyndall found that the atmosphere of a closed chamber became optically pure after a few hours, through the subsiding of the minute particles which are found floating in myriads in the air, and which are only revealed to us on the passage through it of a beam from the electric lamp. On a careful examination of the sides of the "Test tube chamber," it was found that the glycerine with which the walls had been smeared, was covered with minute bodies of various kinds, closely adherent, which a few hours before had been seen floating in the box when the electric light was thrown through it.

As a sick room is only a larger space on which to operate, I do not see that there is any difficulty in applying this principle for the purpose of eliminating from the air of a chamber, or ward of a hospital, those septic and zymotic bodies, the dissemination of which is the cause of so great and distressing a mortality, but I propose that instead of glycerine per se, we mix it with strong carbolic acid, which will act as an antiseptic upon those germs or particles of matter which are given off from the surface of patients suffering from exanthematous diseases. The glycerine will moderate the rate of evaporation of the strong carbolic acid, and as it has decided hygroscopic properties, would continue for a long time exerting its beneficial action, both chemically and mechanically—mechanically locking up the particles, and chemically arresting their vitality, if not absolutely destroying them. Walls, floors, and ceilings could be
cheaply and effectually brushed over with carbolized glycerine. If it is considered that many other anti-septic agents could, if desired, be mixed in like manner with glycerine, I think it will be admitted that good results would probably follow the adoption of some such method as I have ventured to suggest. It is very doubtful (as Mr. Girdlestone has remarked) if much benefit is derived from the employment of gaseous disinfectants alone, so that if we can only catch these subtle bodies which are ever on the wing, seeking some nidus in which to find suitable conditions for propagation, the cause of public health would be advanced, and the employment of the many, very many, almost worthless compounds sold under the name of disinfectants would not be so general, often leading those who have little or no knowledge of physical laws to stumble on in a state of false security. I may mention that I have had also cloths suspended on string, and saturated with carbolized glycerine placed at the openings of doors, &c.

Gertrude-street, Fitzroy.

Australian Medical Journal.
MAY 1876.

MORE OF THE QUACKS.

The following letters speak for themselves:

To the Editor of the "Mount Alexander Mail."

Sir,—Will you kindly allow me, through your valuable columns, to expose a grievance which not only to myself is of a most serious nature, but to the whole district in which I live. One of my children being attacked with a serious illness, which proved to be scarlet fever, and there being no professional attendance to be had nearer than Castlemaine, I sought and obtained the assistance of Mr. Marsh, the chemist of this township, who, after having given the child some medicine, desired me to employ a medical man, and at the same time informed me that a Dr. Bone visited the town professionally every Thursday. On the day named, the doctor arrived at the Crown Hotel, where he is supposed to meet patients who require his services, and I at once sent my son requesting him to come and see my child, when he asked, "Who has been attending your brother?" and on being informed that Mr. Marsh had, he replied that he would not attend any one that employed a quack, at the same time quietly resuming the game at billiards he was engaged at when my son went in. My child, after considerable suffering, was allowed to die, while this humane doctor quietly drove back to Castlemaine. Now, Mr. Editor, I maintain that in a serious case like this (and
More of the Quacks.

especially where professional attendance can be had only once a week, except at great expense) the doctor, whoever he might be, that advertises he can be consulted on a certain day, should be compelled to do so by law, and more so when it is an infectious disease; besides, in my case I was fully prepared to pay him for his attendance while on the spot, whereas I could not have done so if I must have got him to make two or three journeys direct from Castlemaine. — I am, &c.

Newstead, April 3, 1876.

THOMAS HUMPHREY.

To the Editor of the "Representative."

Sir,—In reply to a letter appearing in this morning's Mail, allow me to put you in possession of this fact: that, as Messrs. Marsh, Barker, Yandell, Cook, and Whitney choose to usurp the functions of legally-qualified medical practitioners, charging similar fees, and signing death-certificates, and only calling in a doctor to give a death-certificate when they see the possibility of an inquest ahead, I and the other medical men of this town have resolved in future not to attend any cases where these persons have been employed, and thereby shield them from the consequences of their illegal action. This suggestion emanated from Dr. M'Grath, and has been consented to by Drs. Hutchinson and Malcolm.

Perhaps the superintendent of police is not aware that Mr. Marsh is in the habit of signing death-certificates, and his friend and crony Mr. Blair, the deputy-registrar at Newstead, complacently receives them, and shields his friend the quack.

On one occasion, Mr. Marsh had attended a boy of Mr. Tulley's, at Green Gully, and had opened the knee-joint for an abscess, and never closed it, the consequence being that pyaemia set in, and deposited pus in all the large joints. This affection the quack did not understand, and treated as rheumatic fever, and killed the boy. I sent a certificate of the cause of death in such a form as to cause an inquest to be held, stating that such cause was "pyaemia, caused by malpraxis by a chemist named Marsh, in improperly opening the knee-joint," &c. No notice was taken, and the boy was buried. I communicated with the police, and was told they could not go behind my own certificate. I then demanded to see the register, and found that Mr. Blair, in order to shield his friend Marsh, had deliberately falsified my certificate by omitting all I stated with the exception of the one word "pyaemia." I then posted a letter at Newstead to the Registrar-General, stating these facts, but never heard anything about it. Whether he ever received such a letter I know not.

I am also informed that Mr. Barker, of Chewton, who regularly practises, uses labels with the name of "Dr. Mackay, surgeon," late of Castlemaine, signs death-certificates, he being also the deputy-registrar of that district, as well as ex-mayor and J.P.

Now, Sir, when the law—or rather those who ought to administer it—openly allows the quack every facility for taking the practice of
More of the Quacks.

the legally-qualified man, and when the public is foolish enough, with a miserable parsimony, to entrust the lives of its relations to the quacks' tender mercies, it cannot be wondered at if we protect ourselves in the manner I have alluded to, and which we have determined to strictly adhere to.

There are several inaccuracies of statement in Mr. Humphrey's letter which it is not worth while to notice.—I am, &c.

April 6, 1876.

W. Bone.

[We have since been informed that when Dr. Bone was called on to see the boy Humphrey, the patient was actually moribund, and died within a few hours.—Ed. Representative.]

The advertisement of the person referred to is as follows:

W. E. MARSH,

PRESCRIBING CHEMIST,

NEWSTEAD.

23 years resident in Castlemaine and District.

W. E. M. begs to return thanks to the inhabitants of Newstead, and the Public generally, for their continued confidence, and trusts that by strict attention to business to still merit the same.

GENUINE DRUGS AND CHEMICALS.

Horses and Sick Cattle attended to. Charges Moderate.

"A prescribing chemist!" It is the old story of the public willing to be deceived, because it always has been deceived. These prescribing chemists are to be found all over the colony, not so much in Melbourne, but in the country places swarming. The fact of their having no medical qualification gives them a positive advantage over the regular practitioner. Having no legal warrant for treating diseases, they are, therefore, heaven-endowed. And they are quite secure in the exercise of their vocation, seeing that newspapers support them, and magistrates virtually refuse to punish them. Any protest on the part of the profession raises the old cuckoo-cry of "professional jealousy," as if it were possible to feel anything but passionless contempt for such camp-followers. The public, if they would but take the trouble to understand the situation, are really the greatest sufferers. They have a weakness for whatever is mysterious, uncertain, or indefinite. Moreover, the irregularity has its charm for them. A quack is a sort of "stolen water," which is therefore sweet, and is prized and sought for accordingly; or the commodity is like
smuggled goods, which, although commonly of a very inferior quality, are bought with avidity, simply because they are smuggled. In the end they cost much more than those which could be bought at a respectable tradesman’s, for a reasonable price. It is the sin which gives them their zest. And so with medicine. A regular fee for intelligent advice is prosaic, and wants romance, but a good deal larger fee for panjandrum directions, is money much better invested. The quack may know nothing, and therefore may stick at nothing, but he may have a marvellous endowment. Who knows? Heaven only knows! Medicine-men, like poets, are perhaps not made, but only born. Competency in diagnosis comes by intuition; or, like Dogberry’s reading and writing, it is probably the gift of God, and requires no laborious study as the condition of its obtainment.

In a properly enlightened community such a social anomaly as a quack, would be rubbed out without ceremony. That he is not so rubbed out in this part of the world, is an incidental proof that the community is not properly enlightened, and that we have reached only an incomplete stage of social development. We shall, no doubt, endeavour to accomplish this improvement by means of legislation, but however willing the legislature might be to aid us in the reform, the reform will never be complete until the community itself has been re-organised. And that will not be yet.

MELBOURNE HOSPITAL CHRONICLES.

May 2.—Committee Meeting: A letter was received from the committee of the Reefton Hospital, New Zealand, asking the authorities to receive applications for the post of resident surgeon to that hospital, at a salary of £300 per annum, in addition to the private practice. The request was acceded to.

May 9.—Committee Meeting: The new, or amended, by-laws were considered. Nos. 1 to 43 inclusive were passed without remark. Mr. Gillbee objected to clause 44, which required that before any person could be elected to the office of surgeon or physician to the hospital, he must have previously served as assistant-surgeon or physician for two years. Dr. Hearn defended the proposal, but agreed that the tenure of the office of assistant-surgeon or physician should be reduced from four to two years, and thus increase the number of eligible candidates for the higher office at the general election of officers every four years. After a prolonged discussion, the by-law was agreed to. The intervening clauses having been agreed to, the question of altering by-law No. 48 so as to reduce the
term of office as assistant-surgeon or physician to two years was raised. The discussion was then postponed for a week.

May 23.—Adjourned special meeting of the governors for the purpose of confirming an alteration in by-law No. 47. On the motion of Professor Hearn, the meeting was adjourned until after the special meeting of the governors called for the confirmation of the new by-laws.

Professor Hearn moved the confirmation of the new by-laws, with the exception of Nos. 16, 27, and 67, which had been found to be defective. In framing the rules relating to the honorary staff, the committee thought the highest qualification should be obtained. Those gentlemen who had already occupied a position on the honorary staff would still be eligible, and any member of the College of Surgeons of England, could, if he chose, send home his fees, and obtain the position of fellow, which would render him eligible for the honorary staff of the hospital.

Mr. J. Dwyer moved as an amendment that the whole of the by-laws be referred back to the sub-committee for re-consideration.

Mr. Gillbee said that there were 483 legally qualified practitioners on the register of the colony, of whom 312 were members of colleges, and only 11 were fellows; while of 100 members of colleges of surgeons, only eight were fellows. For the members of colleges, it would be necessary for them to serve two years as assistant-surgeons—a piece of drudgery that few qualified men would accept. As to obtaining the degree of master of surgery, he knew of a gentleman who had been rejected here who went to Glasgow and passed as master of surgery. He asked if such persons were to take precedence over those who were known in the profession? What reason was there for limiting the choice at all? If a gentleman was a qualified man, he was entitled to all the advantages the hospital could give him.

The amendment was then put and carried, 18 hands being held up for, and five against it.

The adjourned special meeting was then resumed.

Mr. J. Dwyer moved the confirmation of the following new by-law:—"No person shall be eligible for election as an honorary physician or an honorary surgeon unless he shall be registered as a legally qualified medical practitioner under any act in force in Victoria relating to medical practitioners; or unless he shall possess (for the office of physician) a degree from some one of the Universities of the United Kingdom, or of the Australian colonies, or of a foreign University recognised by the University of Melbourne, or a diploma from a College of Physicians in the United Kingdom; and unless he shall possess (for the office of surgeon) the degree of Bachelor of Medicine of the Melbourne University, or a degree as Master of Surgery from some one of the aforesaid Universities, or be a member or licentiate of some one College of Surgeons in the United Kingdom."
Mr. Gillbee thought it would be better to send this by-law back to the committee with the others. He moved an amendment that it be referred back to the sub-committee.

The motion was then put, and the new by-law was confirmed by a small majority.

May 23.—Committee Meeting: Communications from the meeting of governors notified the adoption of a by-law in reference to the qualification of the medical staff; also stating that the amended by-laws, submitted to a special meeting of governors, had been referred back to the committee for further consideration. In reply to a question by Mr. Knaggs, of which notice had been given previously, as to the number of clinical lectures delivered by the physicians and surgeons of the hospital since their election, the secretary read the following replies that had been received:

---

154 Collins-street east, Melbourne, 21st May, 1876.—In reply to your letter of 17th, agreeably to your request, I have to inform you that since my election as surgeon to the hospital I have delivered one lecture on clinical surgery, and have given nine demonstrations in operative surgery on the dead body, in addition to the polyclinic in the wards on Tuesdays and Fridays. The idea of substituting for a few months a course of surgical operations on the cadaver for clinical lectures, arose from the fact that the students were not taught in the school of pathology the various operations they were called upon to witness on the living body, in the operative theatre of the hospital; and I am convinced from long experience that the various operations performed by the surgeons are of little practical value to the hospital students unless they have previously rehearsed them in the pathological school. I may also add that the demonstrations are of vital import to the young gentlemen who will soon be called upon to deal with the exigencies of everyday life. I hope, therefore, the committee will see the necessity of ranking the demonstrations with clinical lectures, seeing that they occupy far more time. In conclusion, I may observe that when I am “going round” the wards, I seize every opportunity of explaining to the gentlemen the nature of the patient's case, the principles of diagnosis and its appropriate treatment.—James Geo. Beane, F.R.C.S. Ed.

Lonsdale-street west, Melbourne.—I have to acknowledge receipt of your letter of the 20th inst., requesting me to furnish the committee with the number of clinical lectures delivered by me at the hospital. I have the honor to inform you that I give clinical instruction to the students who accompany me round the wards twice a week, viz., Wednesdays and Saturdays, at about half-past nine a.m. I dilate on and explain every case of importance, but I do not deliver regular or stereotyped lectures, as such may be obtained from any surgical work, and are delivered regularly at the University by the lecturer on surgery.—T. N. Fitzgerald, L.R.C.S.I.

I may here say that clinical instruction at the bedside is of far more use to the student, than the ordinary system of lectures, which would be only a recapitulation of the University course.—T. N. F.
Alcaston House, Collins-street east, Melbourne, 20th May, 1876.
—I am directed by Mr. James to acknowledge the receipt of your note of this date, relative to notice of motion by Mr. Knaggs re clinical lectures, and to inform you that Mr. James has given clinical instruction to the students at the bedside of his patients in the hospital on his regular visiting days (Monday and Thursday) each week.—Pro E. M. JAMES, A. J.

It was resolved that those members of the medical staff who had not furnished the information required, should be requested to do so by the next meeting of the committee, on Tuesday next.

May 30.—Committee Meeting: Letters were received from Dr. Robertson, Mr. Howitt, and Dr. Lawrence, stating that they were in the habit of giving clinical instruction to the students in the wards of the hospital, taking them with them on their rounds, and explaining the cases at the bedside of the patients. A letter was received from the chairman of the special meeting of the governors of the institution, held at the Athenæum, intimating that the whole of the by-laws, with the exception of clause 47, were referred back to the sub committee, for re-consideration. It was decided that the letter should lie on the table for a week. Mr. Knaggs said, with reference to the subject of clinical lectures, there was a minute of the committee passed in July last as follows:—“That the members of the honorary staff who may be elected in August, be required to deliver one clinical lecture, medical and surgical, in equal proportions, weekly, during the University terms in each year.”

He referred to the minute-book, and said that he was glad to hear clinical lectures had been delivered, but there ought to be, as in all large hospitals, a separate day set apart for their delivery. Mr. Gillbee was of the same opinion, but suggested that the matter should be left to the honorary staff to fix the days that would be most convenient to them. Professor Hearn stated that if the matter were postponed for a week he would be able to get such information from the University as would enable the committee to more satisfactorily arrange a day for the delivery of the lectures. This suggestion was accordingly acted upon, and further consideration of the matter left over for one week.

REVIEWS.

Annual Reports on Diseases of the Chest, under the direction of Horace Dobell, M.D., etc. etc. Vol. i. London, 1875.

Six years ago Dr. Dobell published two volumes containing an extraordinary amount of information, of a kind which could not have been obtained in any way, other than that adopted by him, entitled “Progress of Practical and Scientific Medicine in different parts of the World.” He had communicated, at a great sacrifice of
his time, and at obviously very considerable cost, and necessarily in
the face of great difficulties, with medical men in every civilized
corner of the globe, and he had received a great number of replies,
all furnishing information of the most valuable kind. It was next
to impossible that an undertaking of this sort could be continuously
carried on by a single individual. The wonder is that Dr. Dobell
succeeded in going to the extent of two volumes. Such as they
are, however, they remain, even apart from the intrinsic value they
possess, a contribution to the current history of medicine, and a
monument of what industry and determination can accomplish.

But without in any way being dismayed by the difficulties which
confessedly environ a project of gathering facts from the whole
world's area, Dr. Dobell has now restricted his endeavours to the
collection of matters more closely relevant to the special branch of
medicine to which he has devoted himself; namely, diseases of the
chest. He appears to have written to almost every person likely to
supply him with facts bearing upon this department of our common
vocation, and the result is a volume so full of interest, even for those
who are not concerned in the exclusive study of chest phenomena,
that it can hardly help serving as a stimulus to inquiry in the
direction to which it points. Even if it had no other effect, it would
serve to show how much is doing in the world, other than what
is included in the little circle to which we are all more or less
limited.

Dr. Dobell, in the circular issued with his book, says: "Dr. Dobell's
Reports on the Progress of Practical and Scientific Medicine in
different parts of the World, having been discontinued, in conse-
quence of the scope of the work making it impossible to confine its
extent and expenses within reasonable limits, the original design, as
announced in 1868, of a Departmental Report has now been resumed,
with some modifications of detail, and arrangements made for a
Complete Annual Report on Chest Disease. Although the depart-
ment selected is the widest and most important in medicine, it will
be practicable, by keeping within its boundaries, to produce such a
complete précis of all important work, that these Reports, when
collected from year to year, will constitute a comprehensive, concise,
and reliable book of reference on Chest Disease, and will enable the
Medical Practitioner readily to compare the works of different
authors, instead of relying upon those of any one, and to see at a
glance the latest improvements in treatment; while to the Scientific
Student they will present an epitome of modern discovery and
research."

It is greatly to be desired that so excellent a beginning should
be continued, for this, the first volume, contains so much really
practical information, that even chest specialists will have to acknow-
ledge a deal of indebtedness to it. A great man long passed away
once said, "It is a good thing to have the conceit taken out of us,"
and it is quite certain that this Report on Diseases of the Chest
will have this effect, save with those confident people who, knowing
very little, or knowing nothing at all, think they know everything.
So many admirable contributions from so many accomplished practitioners—some of whom exercise their calling in localities that we are accustomed to regard as beyond the pale of scientific comity—are comprehended in this book, that we are at once abashed and gratified; abashed that we should have thought ourselves in advance of some who are clearly our superiors, and gratified that medical research should have extended so far beyond what we anticipated.

This report, so spiritedly compiled by Dr. Dobell, teems with knowledge and overflows with an interest to which it would be difficult to attach an overstated value. We only trust that the great outlay and trouble of obtaining the materials for it will not deter Dr. Dobell from continuing the series so well began. The whole profession is indebted to him for his most praiseworthy efforts to gather together the records of what is doing, in so important a department of practical medicine as that of which he is himself a most worthy exponent, and he ought to receive support from all who recognise the value of scientific co-operation and associated research.

On Internal Tumours, their Characteristic Distinctions, and Diagnosis. By Walter Balls-Headley, M.A., M.D. Cantab. Melbourne, 1876.

This is an abstract of what is generally known upon the subject of which it treats. If it does not present anything new, it gives, in a conveniently condensed form, a description of the several lesions comprehended under the general designation of abdominal morbid growths, and the cases furnished are selected with judgment and succinctly described.

It is uncertain, however, whether the book is addressed to the public or the profession. If to the former, many of the terms are too technical for ordinary comprehension. If to the latter, some of the explanations are not necessary. A non-medical person is not likely to understand very clearly what is meant by "nucleated epithelial cells," and it is hardly necessary to explain to a medical man that "a Graafian vesicle * * * contains a human ovum or egg," or that the "peritoneum (is) the lining membrane of the abdominal cavity." A book on any medical subject should either be popular or strictly professional. It is not easy, indeed we may say it is not possible, successfully to combine the two. A person not medically educated is only bewildered by the employment of technical terms, and a medical man very naturally resents an explanation which, on the face of it, presupposes him to be imperfectly informed.

Another objection which forces itself a little prominently upon the attention is the somewhat too frequent allusion to errors of diagnosis committed by medical practitioners. The stress laid upon this alleged tendency to error, is here and there so emphatic, as to lead one to suppose that the author had a mind, in dwelling upon...
the mistakes of his brethren, to draw attention to his own more-careful habit of investigation. It is possible Dr. Balls-Headley may have had a larger experience than is ordinarily enjoyed in the study and treatment of abdominal tumours, but as we are not all fortunate alike in this world, we would beseech him to look tenderly upon the errors of his less favoured fellows. We can none of us do more than act according to our lights, and some of us may have been obliged to grope in grey dawn, and have stumbled accordingly.

But the book is not diffuse. The descriptions are short and concise, and the little work itself may be read through at a sitting, and that is a merit in these days of big weary books. Those who, like Dr. Balls-Headly, have given their particular attention to this subject, may not find anything novel in it; but it will do them no harm to have their memory refreshed by some things that are in it, while to those who have not bent themselves expressly in the direction of abdominal tumours, this compendium may develop an interest they have not yet experienced, more especially as the likelihood of mistake in diagnosis is so considerable, and the consequences of such error frequently so serious.

ABRIDGEMENT OF NEWS FROM EUROPE AND AMERICA.

Dr. G. Mayer, of Aix-la-Chapelle, says the Baltimore Physician and Surgeon (quoted in the Practitioner), has treated 60 cases of diphtheria by the administration of ice or iced water, and with only one death. Small pieces of ice, or small quantities of iced water, were put into the mouth uninterruptedly day and night for the first two or three days, in the worst for a longer time. Even in infants, the continuous administration of teaspoonful doses has been followed with the best results. In all cases the fever was shortened, and in many, decided improvement took place on the second day.

Dr. Otto Liebreich, the inventor of chloral, holds the theory that it exerts its peculiar action by breaking up in the body into chloroform. According to the Medical Times and Gazette, a lady student, F. A. Tomaszewicz, at Zurich, has by a series of very delicate experiments, shown the inventor to be at fault. Chloroform can be detected neither in the blood nor in the urine of patients who have taken large quantities of chloral, which is eliminated by the kidneys as such. F. Tomaszewicz assumes that the rapidity with which chloral is absorbed, so that there is no time for a stage of excitement to be produced, and the slowness with which it is eliminated, account for its soporific effects.

Apropos of a letter sent by an American Degree Broker, to a Mr. Spakes of Shelton, offering to procure an American degree for
certain monetary consideration, and forwarded to the Minister of Education at Washington, a reply was returned, according to the *Lancet*, from which is subjoined an extract: "The Charter of the University of Philadelphia was revoked some two or three years ago, on account of the notorious and shameless sale of degrees, and similar rascalities. It has no actual or legal existence. Allow me to assure you that no respectable institution of learning in the United States confers degrees for money. If degrees are conferred at all, they are conferred with other motives than pecuniary gain. The reason why this particular fraudulent institution has been successful is, because the University of Pennsylvania, whose name it imitates, is an institution of great corporate wealth, and high intellectual character.—Charles Warren, Acting Commissioner of Education, Washington, August 18, 1875."

Wolkenstein, says the *Lancet*, finds as the result of experiments on animals, that the skin is permeable by dilute, but not by concentrated watery solutions; that increase of temperature greatly increases the absorptive capacity of the skin; that young animals' skins absorb best and most quickly, and that a few alkaloids may be absorbed and give rise to their peculiar toxic influences.

Dr. Leo Popoff, of St. Petersburgh, according to the *Medical Times and Gazette*, in the brains of typhoid and typhus fever patients, has found changes of an acute inflammatory nature, involving not only the walls of the blood-vessels, but also the neuroglia and ganglion cells.

Surgeon E. P. Vellum, says the *Lancet*, in a contribution to the magnificent series of publications of the War Department of Washington, on the Hygiene of the United States Army, gives an account of the diseases of Salt Lake Valley. Among the Mormons, two-thirds of all the deaths are of children under five years of age; deaths of males over females are 50 per cent.; polygamous children seem as healthy as monogamous, physically and mentally. Polygamy furnishes hitherto no instances of idiocy, insanity, rickets, strumo-tubercule or debasing constitutional condition of any kind. The adult population are as healthy as in any part of the United States, and there is a fair number of cases of extreme old age. The great mortality of children is due to absence of medical aid, (laying on of hands by the elders being the substitute.) The only noticeable defect is a saddened expression of countenance on the Mormon children, an absence of cheeriness and laughter common to that age. The young women who are ruddy, robust, and well-made, lack the amiable, bright, and cordial countenances characteristic of young women everywhere. This is supposed to be due to the pre-natal influences of the polygamous relations of the mother.
De Fuke, of San Francisco, says the *Pacific Medical and Surgical Journal*, recommends the use of arsenic (Fowler’s Solution) as an antidote to alcoholic poisoning. Dr. Morey, in the same journal, recommends the use of liquor strychniae.

The deaths are announced in the medical journals of Dr. Hughes Bennet, of Edinburgh, well-known as the introducer of cod-liver oil into use in Britain, as well as for his advocacy of the present treatment of pneumonia; of Duchenne de Bologne; and of G. L. Cooper, F.R.C.S., nephew of Sir Astley Cooper.

Mr. Lucas, of Guy’s Hospital, gives in the *Lancet* the results of the local application of chloral hydrate to ulcers. Lotions of the strength of two, three, and four grains of chloral to the ounce of water quickly cleanses foul sloughing ulcers, and begets a healthy appearance. Rapid healing follows. The effect appears to be that of a stimulant and disinfectant, which causes at first considerable pain, but no risk is run of hypnotic effects.

---

**LOCAL TOPICS.**

At the meeting of the Medical Board, on the 5th instant, the following names were registered: Edward Hamilton Blair Barker, Melbourne, M.B. Melb. 1876; George Haley, Fitzroy, M.B. Melb. 1876. Additional qualification: Walter Balls-Headley, Melbourne, M.D. Melb., *ad eundem gradum*. Names erased from the register: B. W. Gummow, John Warnock, deceased.

At the meeting of the Alfred Hospital Committee, on the 12th instant, Mr. W. B. Rankin, F.R.C.S. Ed., was elected honorary surgeon attending the in-patients on the medical side, in place of Dr. Bird, resigned.

On the 29th of May, at a meeting of the Council of the University of Melbourne, Sir Redmond Barry was elected Chancellor for the twenty-fourth time, and Dr. Brownless Vice-Chancellor for the twentieth time.

The following health-officers have been appointed: H. H. Radcliffe, M.R.C.S. Eng., L.S.A. Lond., for Ballarat East, vice Dr. Clendinning, deceased; J. A. Sutherland, L.R.C.P. et S. Ed., for Dunolly, vice Mr. E. Green resigned; E. Davy, M.R.C.S. Eng., L.S.A. Lond., for Malmesbury; H. Meyler, L.A.H.D., for the shire of Winchelsea; C. Kieser, M.D. Wurz., for the shire of Ripon (east riding); Matthew Brisbane, L.R.C.S. Ed., for the shire of St. Arnaud.

The *Argus* of May 29th had the following: “We understand, that in pursuance of a request from the authorities at Reefton, New Zealand, to select a medical officer for the Reefton Hospital, the surgical staff of the Melbourne Hospital have unanimously recommended Mr. W. E. L. Hearn, M.B., for that office.”

Mr. H. Crossen has been appointed public vaccinator for the district of Echuca, vice Dr. McMullen resigned.
A coroner's jury at Young, New South Wales, lately in returning a verdict of death from exhaustion after childbirth, added the following rider:—"We consider the practice of medical men prescribing in serious cases, without seeing the patient, is to be condemned."

The subjoined letter was addressed to the Argus of the 21st May, Sir,—I am desirous of drawing the attention of the governors of the Melbourne Hospital to the proposed alteration in By-law 47, a meeting for the consideration of which is called for Monday next (May 22), at 3 o'clock, at the Athenaeum. I am satisfied that not half a dozen of the governors know the nature of the change proposed by the committee, nor the serious injustice it would occasion if adopted. It consists of nothing less than the limitation for the future of candidates for the honorary surgery to those gentleman holding the fellowship of a college of surgeons, or the mastership in surgery of a university. Now there are 483 medical practitioners on the register of this colony; of these 312 are members or licentiates of colleges of surgeons, and only 11 are fellows, and 14 masters in surgery, only four of whom reside in Melbourne. It is actually proposed, therefore, to disqualify nearly eleven-twelfths of the whole body of practitioners, and to limit the selection of surgeons to 15 persons, eight of whom I have good reason for knowing would never become candidates. Practically, therefore, the selection is reduced to seven, most of whom, practising in the country, would also be most unlikely to be candidates. If this rule had been in existence at the last election, three of the present honorary surgeons, and the whole of the assistant surgeons, would have been ineligible. In fact, it would have been virtually impossible to complete the staff.

You will permit me to observe that I am not now speaking in my own future interests—supposing me ever to be a candidate again, which is not at all likely—as, by another rule, previous holders of the office of surgeon are eligible as candidates solely for this reason, irrespective of qualification. I speak solely on behalf of the large body of surgeons who, no matter what their fitness on the score of ability, would be shut out from competing if this by-law were confirmed.

I pointed out this injustice when the by-laws were under revision in committee, but without effect; and I have therefore no option but to draw attention to it through the medium of your columns.

I will take the present opportunity of saying that I have no objection to the tenure of office of assistant surgeon being reduced to two years; but I think the inducements should be held out of giving to the assistant-physician or surgeon who has served for two years 25 beds for in-patient practice for a further period of two years. This, also, I proposed in committee, but, as in the other case, with no other result. I do hope that the governors to-day will most emphatically refuse to adopt the recommendation of the committee. It may be, theoretically, very well to insist that surgeons of the Melbourne Hospital should possess the highest qualification obtainable, and if the number of fellows in the colony were, say 100 instead of only 11, I should have no objection to agree to the selection being made from them. As matters stand, I can only regard the proposed limitation as absurd. Its injustice will be apparent to anybody.—I am, &c.,

WILLIAM GILLBEE, M.R.C.S.

Dr. John Johnson, M.B. Melb., lately resident medical officer at the Kew Lunatic Asylum, was admitted a member of the Royal College of Surgeons of England in February last.
It is intended to include in the Pharmacy Bill, to be introduced by Mr. Bosisto into the Assembly during the ensuing session, a clause exempting chemists and druggists from serving on juries.

From August 1875, to the end of May 1876, the number of deaths from scarlet fever in Melbourne, were over eleven hundred.

The monthly meeting of the Microscopical Society of Victoria was held on May 25th; the president, Mr. T. S. Ralph, in the chair. Mr. Ralph read a paper on "Media for Microscopic Preparations," and exhibited the results of experiments undertaken with a view to supply the want of one that should behave like balsam, but yet be applicable to moist tissues. His most successful results had been obtained by the use of chloral hydrate with various other substances, and notably a varnish formed by the fusion of chloral with quinine. He illustrated the mode of manipulation, and handed round slides in various stages of treatment with the several preparations. Mr. Sydney Gibbons lectured on the "Anatomy of Marchantia," a plant ranking between the mosses and ferns, and promising several characters of interest to the microscopist and vegetal physiologist. He described the different organs and structures of the plant, exhibiting two growing specimens of different species in fruit, and illustrating his descriptions with enlarged drawings, and microscopic demonstrations.

The first dinner of the Pharmaceutical Society of Victoria took place at Clement's Hotel, on May 24th. The president, Mr. Bosisto, occupied the chair, and there were present about 40 members and friends. The list of toasts was as follows: The Queen; The Prince and Princess of Wales, and rest of Royal Family; The Governor; The Pharmaceutical Society of Victoria, coupled with the name of The President; The Medical Profession of Victoria; The Pharmaceutical Society of Great Britain; Kindred Societies; The Press; The Ladies.

Professor Coughtry, of the University of Otago, is endeavouring to form a general Medical Association for New Zealand, with branch societies in the principal centres of population. Also, a Medical Journal in connexion with the Association.

On the 12th of April, at the County Court, Melbourne, Mrs. Seekamp, a nurse, summoned Dr. Motherwell for expenses which she said she had incurred in the maintenance of a Miss Mackey. Plaintiff alleged that Miss Mackey had been given into her charge by Dr. Motherwell as a patient in a state of unsound mind. She had nursed the young lady for a fortnight, and the latter had then so far recovered as to permit of Mrs. Seekamp's services being dispensed with. Dr. Motherwell, plaintiff said, had told her that he would pay her for her services, but no amount was named. The defendant, on the other hand, said that no such conversation had taken place, and that he had never considered Mrs. Seekamp a nurse. The judge held that Dr. Motherwell had rendered himself liable for expenses of maintenance, and made an order for £3 3s., with £1 5s. costs.

At an inquest held in Adelaide a few weeks ago on the body of a woman who had died from scarlet fever, after having been attended by a chemist only, the jury returned the following verdict:—"That she died of scarlet fever. We are of opinion that Mr. Wood is highly censurable for prescribing in this case, and that the practice of chemists prescribing in serious cases of illness should be discontinued."
The *Saturday Advertiser*, a Dunedin newspaper, lately had the following: A Missing School.—The Medical School of the Otago University has gone a-missing. The finder will be handsomely rewarded on application at the office of the *Saturday Advertiser*.

**MARRIAGES.**

*MOLONEY—QUIRK.*—On the 11th May, Patrick Moloney, M.B., Melbourne, to Ellen, second daughter of the late James Quirk, of Carlton.

*TEAGUE—ELLES.*—On the 5th May, James Pascoe Teague, M.D., of Collins-street east, to Sybella, youngest daughter of M. J. Elles, of Oporto.

**DEATH.**

*WYLIE.*—On May 20th, at Hamilton, James Roxburgh Wylie, M.D. et Ch. M. Glas., aged 33 years.

**NOTICES TO CORRESPONDENTS.**

Communications have been received from Dr. Bone, Dr. P. Smith, Dr. Day, Mr. Blackett, Baron von Mueller.

The following publications have been received:—The Lancet for Feb. 12, 19, 26, Mar. 4; The Students' Journal for Feb. 12, 26; Squires' Outline Drawings of the Figure for recording the situation and form of Skin Diseases; Burgoyne, Burbidges and Co.'s Prices Current; The Pacific Medical and Surgical Journal for March and April; The New York Medical Journal for March; The New York Medical Record for Feb. 26, Mar. 4, 11, 18, 26, April 1, 8, 15; The British Medical Journal for Feb. 12, 19, 26, Mar. 4; The Medical Press and Circular for Feb. 9, 16, 23, Mar. 1, 8; Descriptive Notes on Papuan Plants, by the Baron von Mueller, Parts I. and II.; The American Journal of Insanity for April; The Canada Medical and Surgical Journal for Feb., March, and April; Prospectus of the Eighth Annual Session of the Medical Department of the Howard University-