

SCIENTIFIC AND SANITARY.

THE RATIONAL USE OF MEDICINE.

NOTHING indicates more clearly the modern progress of medicine than the disappearance of the bulky and disagreeable boluses, powders, draughts and mixtures which the physicians of former times administered to their patients, in many cases with but little effect, except to put an additional burden upon an already wearied and overloaded stomach. The homeopathic physicians have, at least, shown that excessive medication is unnecessary, and that no medication at all will result in an equal number of cures in a great majority of cases, while the present tendency of all schools of medicine is to limit their prescriptions, both in number and quantity, and place more reliance upon hygienic and sanitary precautions, combined with watchful and experienced nursing and care. The philosophy of prescribing what are popularly known as "medicines" is really a very simple matter. It is a well-known fact that certain substances, when taken into the system, produce certain physiological effects. Thus, opium and its alkaloids produce sleep, ipecac causes vomiting, quinine is found to have a remarkable power of controlling intermittent fevers, and so on through the list. There is really no difference between a medicine and a poison, except in the violence of its action; and, in fact, some of the most powerful poisons are found to be valuable medicinal agents when administered in minute doses. The scientific physician therefore, will not attempt to "cure" a disease by any specific remedy, but will endeavour to fully understand the cause and nature of the abnormal physiological action which is taking place in the system of his patient. As the action of medicines is very variable in different persons, and under different conditions of the disease, the necessity of skilful medical attendance, and the folly of depending upon the various widely-advertised patent medicines, are evident.—*Popular Science News.*

COLOUR IN THE ANIMAL KINGDOM.

COLOUR in the animal kingdom is due to two causes—either to the presence of colouring matters, of pigments, or to the presence of fine sculpturing, which produces an optical effect of a certain colour. What we term metallic colours in birds—humming-birds, for example—and in butterflies, are not caused by pigments of that tint, but by fine grooves upon the feathers or scales, and thin laminae of horny substance. Very often these two causes are combined; they are, for example, in the peacock. An albino peacock is by no means a rarity; and if the tail-feathers of one be closely examined they will be seen to show a pattern like that of a damask tablecloth. This pattern is due to the fine grooves ruled upon the feathers, which are differently disposed in the rings which form the "eye"; but the blackish-brown pigment is absent, and so the grooves produce no effect of colour. Very often the colour of an animal is due to two pigments combined; for instance, the beautiful green of the iguana lizard is due to a distinct yellow and a blue pigment. But these colours can not be washed out by water, though they soon fade after death—at least the yellow does—leaving the animal of a grayish-blue colour, which is the prevailing hue of stuffed lizards. Among butterflies "mechanical colours" appear to be the rule; but the "brimstone" is an exception, for from its wings a yellow pigment can be extracted. The questions relating to the colour of animals were once only the theme of poets, but are now the property of scientists, who have built up most interesting theories to account for the nature and distribution of colour. But these theories have, for the most part, dealt with the question in reference to such intelligent groups of creatures as birds and insects, and have rather ignored worms and starfishes and crabs, and such like beings of a limited intellect, whose aesthetic sense, even of the most ardent followers of Darwin, must appear somewhat doubtful. A congregation of blue, purple, and red invertebrates living four miles below the surface of the sea can not reap much advantage from being impressed by their neighbour's gaudy attire, even if they could see it; but they can not see, for the very good reason that, for the most part, they have no eyes, and, if they had, it is too dark to see. On the other hand, even among insects and birds, the greater number are plainly coloured, and show no great difference of sex; and we must assume, therefore, that even between closely-allied species belonging, in some cases, to the same family—or it may be genus—there is an enormous gap in intellectual development if we are to accept a theory of "sexual selection." It is in reality probably necessary to disentangle, from their very intimate relationship, the two classes of colours mentioned above, before we can arrive at any useful hypothesis as to their meaning. It is very noticeable that in numerous marine creatures whose mode of life renders concealment unnecessary, "warning colours" futile, and sexual colouration impossible, the frequently brilliant colours are entirely due to pigments deposited in the skin. On the other hand, in butterflies and birds, where sexual selection and so forth is conceivable, the colours are largely produced by mechanical causes affecting the structure of the feathers or scales. In fact, it is not too much to say that nearly all, if not quite all, birds in which the two sexes show a marked disparity of colouration, owe their brilliant hues to structural peculiarities of the feathers, and not to pigments.—*Frank E. Beddard, in Blackwood's Magazine.*

ACCORDING to a recent work on longevity, published in Norway, the average duration of life in that country is 48.33 years for men, and 51.3 for women.

READINGS FROM CURRENT LITERATURE.

TO VIOLETS.

WELCOME, maids of honour,
You do bring
In the spring,
And wait upon her.

She has virgins many,
Fresh and fair;
Yet you are
More sweet than any.

You're the maiden posies,
And so graced
To be placed
Fore damask roses.

Yet, though thus respected,
By-and-by
Ye do lie,
Poor girls, neglected.

—Robert Herrick.

INTERRUPTED MEMORY.

FROM an article entitled "A Study of Consciousness," by Professor H. S. Wood, in *The Century* for May, we quote as follows:—"During the Centennial Exhibition a big, burly Scotchman was brought to the hospital unconscious from sunstroke. I plunged him into a mass of slush and water and piled great masses of ice about his head. As he gradually struggled back to consciousness, his first sensation was that he was packed away in an ice-box and doomed. When he came more fully to himself his first enquiry was, 'Who am I?' I said, 'Who are you?' This he could not answer. For four days that man lay in the hospitable, apparently perfectly rational, wondering who he was. During all this time his friends were searching, and had detectives looking for him all through Philadelphia. At last his recollection came back, and he was able to give his name." "Some years ago in one of our Southern cities a man was seized by the police and taken to a hospital, where he told the following story:—'I know nothing who I am or where I came from. All I know is that I found myself on the railroad platform a short time ago. I then drifted into a hall and heard a temperance lecture; goaded into fury by the eloquence of the speaker, I rushed out and began to smash the windows of a neighbouring drinking-saloon; a consequent attack on me by the roughs led to my arrest by the police and my being brought to the hospital. That is all I know; who I am, I cannot tell.' At the time of the publication of the report of this case the hospital authorities had not found out who the man was."

MR. PUNCH'S DICTIONARY OF SOCIAL PHRASES.

"You are one of the few people with whom I can really enjoy a quiet talk, all to our two selves;" i.e., "I should be very sorry to introduce you to any of my set."

"What, you here?" i.e., "Wonder how the deuce this confounded cad got an invitation."

"Ah, by the way, just let me introduce you to Farrodust. You two fellows ought to know each other;" i.e., "Call that killing two bores with one stone."

"Thanks for a most delightful evening. So sorry to have to run away;" i.e., "Bored to extinction, and fairly famished. Must run down to the Club for a snack and a smoke."

"I'll look at my list when I get home;" i.e., "You don't catch me."

"Drop in any day;" i.e., "When the chances are I shan't be in."

"No party;" i.e., "Must ask him, and do it as cheaply as possible."

"Come as you are;" i.e., "Be careful to wear evening dress."

"Don't trouble to answer;" i.e., "Think it very rude if you don't."

"What! going already!" i.e., "Thank goodness! Thought she'd never move."

"What a fine child!" i.e., "Don't know whether the brat is a boy or a girl, but must say something."

HOW MEN DIFFER PHYSICALLY.

CONSIDER two men of the same race and country. Their remote ancestry, both human and prehuman, has been the same. There is, therefore, a considerable amount of identity in the sum of the influences under which they came into existence; there are also some few other identical events in the conditions of the climate in which they live, and even in the food they feed on. On the other hand, each of the men has been subjected to a variety of influences that have affected him separately and specially. In consequence there is a certain likeness between the two men, intermediate between identity on the one hand and complete dissimilarity on the other. It is easy to express the average measure of this likeness in respect to any characteristic that admits of measurement. Stature will serve as an example: thus I found that, if any considerable number of couples of Englishmen are taken at random, the difference between the statures of the two men that compose each couple falls just as often below two inches and four-tenths as above that amount. We may express the same fact in other language by saying that it is an

even bet that the statures of two Englishmen taken at random will differ less than two inches and four-tenths. The relation between brothers is closer than this, because the number of identical influences that affect them is greater. The whole of their ancestry from their parents upward is the same. I found that the difference between couples of English and adult brothers fell as often below one inch and four-tenths as above it.—*Francis Galton in North American Review for April.*

A TWILIGHT SONG.

For unknown buried soldiers, North and South.

As I sit in twilight, late, alone, by the flickering oak-flame,
Musing on long-past war scenes—of the countless buried unknown soldiers,
Of the vacant names, as unindented airs and seas—the unreturn'd,
The brief truce after battle, with grim burial-squads, and the deep-filled trenches
Of gather'd dead from all America, North, South, East, West, whence they came up,
From wooded Maine, New England's farms, from fertile Pennsylvania, Illinois, Ohio,
From the measureless West, Virginia, the South, the Carolinas, Texas;
(Even here, in my room-shadows and half-lights, in the noiseless, flickering flames,
Again I see the stalwart ranks on-filing, rising—I hear the rhythmic tramp of the armies);
You million unwrit names, all, all—you dark bequest from all the war,
A special verse for you—a flash of duty long neglected—your mystic roll strangely gather'd here,
Each name recall'd by me from out the darkness and death's ashes,
Henceforth to be, deep, deep, within my heart, recording, for many a future year,
Your mystic roll entire of unknown names, or North or South,
Embalmed with love in this twilight song.

—Walt Whitman, in *The Century* for May.

INDIAN HUMOUR.

THE Indian has a keen appreciation of humour, and is like a child in his mirthfulness. No orator can see the weak spots in his adversary's armour or silence a foolish speaker more quickly. Old Shah-bah-skong, the head chief of Mille Lac, brought all his warriors to defend Fort Ripley in 1862. The Secretary of the Interior, and the Governor and Legislature of Minnesota, promised these Indians that for this act of bravery they should have the special care of the government and never be removed. A few years later, a special agent was sent from Washington to ask the Ojibways to cede their lands and remove to a country north of Leech Lake. The agent asked my help. I said: "I know that country. I have camped on it. It is the most worthless strip of land in Minnesota. The Indians are not fools. Don't attempt this folly. You will surely come to grief." He called the Indians in counsel, and said: "My red brothers, your great father has heard how you have been wronged. He said, 'I will send them an honest man.' He looked in the North, the South, the East, and the West. When he saw me, he said, 'This is the honest man whom I will send to my red children.' Brothers, look at me! The winds of fifty-five years have blown over my head and silvered it over with grey, and in all that time I have never done wrong to any man. As your friend, I ask you to sign this treaty." Old Shah-bah-skong sprang to his feet and said: "My friend, look at me! The winds of more than fifty winters have blown over my head and silvered it over with grey; but they have not blown my brains away." That counsel was ended.—*Bishop Whipple in North American Review for April.*

DO HEADS GROW WITH ADVANCING AGE?

SOME amusing letters have appeared in a daily contemporary in regard to an alleged steady increase in the size of Mr. Gladstone's head, which, it is said, is rendered manifest by a progressive enlargement in the size of the hat required to cover it. The correspondence exhibits an extraordinary ignorance of well-ascertained facts; for, if there is one thing which would be acknowledged by all anatomists and physiologists, it is that the nervous system, like other parts of the body, undergoes atrophy with advancing age—an atrophy that pervades every tissue, and is as apparent in the thinning of the vocal cords that alters the voice to "childish treble," as in the shrunk shanks for which the "youthful hose, well saved, are a world too wide." No reason can be assigned why the brain should escape the general change that affects the digestive and the circulatory systems alike. Its attributes and faculties attain their highest excellence at or before mid-age, and from that time forth exhibit only a steady decline. The ossification of the sutures of the cranium practically prevents increase of the volume of the brain in advanced life; and, even granting some slight increase, such increase would be compensated for by the attenuation of the cranial bones, which is well known to occur in old age. A change in form there may be, but none in size.—*London Lancet.*

THE *Paris Temps* states that out of a total of 45,000,000 hectolitres of wine consumed in France, not 2,000,000 hectolitres were manufactured from raisins.