the leaves. It takes about a quarter of an hour to cut leaves enough to fill a trough. The troughs are so distributed as to be easily accessible to the cutters. Their number is generally five, and by the time the fifth is filled, the cutters return to the first, and throw out the leaves, which they regard as exhausted. The leaves are neither infused nor boiled, nor is any use afterward made of them, except for manure.

"When the vessels receiving the juice become filled, the latter is removed to a cask and reserved for evaporation. This may be done at once, or it may be delayed for weeks, or even months, the juice, it is said, not fermenting or spoiling. The evaporation is generally conducted in a copper vessel; at the bottom of this is a large ladle, into which the impurities sink, and are from time to time removed as the boiling goes on. As soon as the inspissation has reached the proper point (which is determined solely by the experienced eye of the workman), the thickened juice is poured into large gourds, or into boxes, and allowed to harden."

This product varies from an orange brown (Curaçoa aloes, usually) to a chocolate brown. The latter when broken up exhibits the orange-brown color also. It is commonly of a waxy lustre, dry and brittle or friable, but is occasionally harder and of a glassy lustre. Its peculiar odor constitutes its most characteristic feature. It is the chief source of *Aloin*, and is regarded as a very good article, though cheaper and less desired than the next. A large amount of it is, however, sold under the title of the next.

Aloe Socotrina (*Socotrine Aloes*) is yielded by *Aloe Perryi* Baker. From Socotra the drug was formerly brought into Europe via the Red Sea and Alexandria. After the discovery of the route around the Cape of Good Hope, it followed the course of commerce in that direction; at present, Socotrine aloes is apt to go to India, and from there to England, with the enormous mass of Indian products.

It comes from various parts of Eastern Africa. The preparation of Socotrine aloes is said to differ from that of Barbadoes, in that the heat of the sun is relied upon for its evaporation. Although sometimes imported in large barrels, it is usually in small kegs or small skins. The latter is a cheaper grade, dry and brittle, the former a soft-solid, at least at the centre, where it is frequently very soft, so as to flow. Socotrine aloes is typically of a brownish yellow or yellow brown, rather than an orange brown like the last, but it is occasionally darker, nearly of a brown black. There should never be any hint of green in its color. If exposed to the atmosphere, it at length becomes hard, through evaporation. Its odor is much finer than that of Barbadoes. Although not, strictly speaking, less strong, it is less rank and heavy. It is its odor which is relied upon for identification, as well as for an indication of its quality.

Both official varieties are described as having a saffron-like odor. It is said that if the nearly liquid varieties are allowed to stand, they will separate into a nearly black upper stratum and an orange-brown crystalline sediment. It is assumed that the darker or lighter colored varieties depend upon varying proportions of these two component parts. Both varieties are mostly soluble in alcohol and water, the Socotrine more slowly in the latter.

Both, on being dissolved in water or alcohol, yield a crystalline sediment of aloin. Both consist chiefly of a resin-like substance which is soluble in alcohol and hot water, but precipitated from the latter solution by boiling. A small amount of volatile oil is found in both. *Aloin* is about five times as active as aloes.

Aloe Purificata, U. S. P., is Socotrine aloes which has been heated, dissolved in alcohol, strained through a No. 60 sieve, evaporated, cooled, and broken up.

Considering its immense importance as a drug, the action of aloes is a remarkably simple one. Aside from its action in the mouth and stomach as a simple bitter, its operation is almost entirely confined to the lower part of the large intestine, where, by its irritant properties, it powerfully stimulates peristalsis and moderately stimulates secretion. It is therefore a very dilatory, but quite active cathartic. Its action is quite apt to be griping and painful, especially to those affected with hemorrhoids. Although it has been claimed that this condition can be relieved by the skilful, continued use of aloes, this is doubtful; while it is certainly true that the condition is thus frequently aggravated in a serious degree. A diuretic effect frequently accompanies the purgation, and is probably in chief part due to a mere extension of the irritation. The same is to be said of its emmenagogue effect, and it is to be remembered that this may lead to abortion. The intensity of the action of aloes is quite variable, not only in different individuals, but in the same individual at different times, and this is especially true when aloin is used alone. This is believed to be due to variations in the solution of the aloin. The bile is its natural solvent. Glycerin acts similarly, and either of these solvents, injected into the rectum with aloes, will cause it to take effect. Taken internally, alkalies increase its activity, as does iron. Aloes can be absorbed by the subcutaneous tissue, excreted into the bowel and become active. Because of its slowness, and its limited field of action, it is usually preferred to combine it with some differently acting cathartic. Its peculiar mode of action indicates that aloes is especially useful in those cases of constipation which result from torpidity of the intestinal muscles.

The dose of aloes is exceedingly variable, according to the patient and the effect desired, being from 0.03 to 0.6 gm. (gr. ss.–x.).

The Pharmacopœia provides no preparation of Barbadoes aloes, but a large number of the purified Socotrine aloes, as follows:

Liquids.—Tinctura Aloes, containing 10 per cent. of aloes and 20 per cent. of licorice root, made with 50 per cent. alcohol, dose 1 to 4 c.c. (fl. ʒ ¼–i.); Tinctura Aloes et Myrrhæ, containing 10 per cent. each of aloes, myrrh, and licorice root, made with 75 per cent. alcohol; dose the same as of the last.

Solids.—Extractum Aloes (Aqueous), dose 0.03 to 0.2 gm. (gr. ss.–iij.); Extractum Colocynthidis Compositum, containing aloes 50 per cent., extract of colocynth 16 per cent., resin of scammony and soap, each 14 per cent., cardamom 6 per cent., dose 0.06 to 1.0 gm. (gr. i.–xv.); Pilulæ Aloes, each containing 0.13 gm. (gr. ij.), each of aloes and soap; Pilulæ Aloes et Asafœtidæ, each containing 0.09 gm. (gr. iss.) each of aloes, asafœtida, and soap; Pilulæ Aloes et Ferri, each containing 0.07 gm. (about gr. i.) each of aloes, dried sulphate of iron, and aromatic powder, with a little confection of rose; Pilulæ Aloes et Mastiches, each containing 0.13 gm. (gr. ij.) of aloes, 0.04 gm. (gr. ¾) mastic, and 0.03 gm. (gr. ss.) of red rose; Pilulæ Aloes et Myrrhæ, each containing 0.13 gm. (gr. ij.) aloes, 0.06 gm. (gr. i.) myrrh, and 0.04 gm. (gr. ¾) of aromatic powder, Pilulæ Rhei Compositæ, each containing 0.13 gm. (gr. ij.) rhubarb, 0.1 gm. (gr. iss.) aloes, 0.06 gm. (gr. i.) myrrh, and a little oil of peppermint.

Unofficial Varieties of Aloes.—*Aloe Capensis*, or Cape aloes, is the hardest and most brittle variety, with a strong, usually glassy lustre and a very conchoidal fracture. It is usually blackish (brown black or greenish brown black), occasionally dark reddish brown. It has a very unpleasant odor, is not crystalline, and contains no aloin, and is mostly used in veterinary practice.

Aloe Natalensis, or Natal aloes, has a dull surface and a grayish-yellow brown color. It is crystalline and contains aloin, but is weak in odor and taste.

Hepatic aloes is a name which has come to be applied to any form having a distinct liver-brown color.

H. H. Rusby.

ALOPECIA.—Alopecia is a partial or general loss of hair, from any cause whatever, and that in sufficient quantity to be noticeable to the naked eye.

The word "alopecia" is derived from the Greek Ἀλώπηξ, meaning fox. Why this word has been used to express baldness, it is difficult to say. One explanation might be that the fox is said to have, normally, two bald spots over his eyes, and another, that he is especially liable to the disease.

The term, as it is used to-day, covers a broader field than it did formerly. It includes not only all varieties and degrees of dystrophies and atrophies of the hair of the scalp, causing baldness, but also similar conditions of the hair upon any other part of the body.

In text-books the alopeciæ are usually divided into two main classes, congenital and acquired. In the present article this classification is not followed, but we will attempt to give a more scientific one instead.

Alopecia may be due to a local disease of some hairy part of the body, and in this case it would be limited throughout its whole course to the part in which it commenced, or it may be the result of disease elsewhere, and then the consequent baldness is only incidental to the other affection.

This line of thought also evolves two principal classes: (1) Alopeciæ essentiales, idiopathicæ sive primariæ; (2) Alopeciæ symptomaticæ sive secundariæ. The first class includes the congenital and senile forms, and those primary affections of the hair that are premature, comprising alopecia presenilis, alopecia pityrodes, alopecia areata, folliculitis decalvans, and dermatitis papillaris capillitii.

(*Note.*—We are well aware of the fact that strict logic would really not permit alopecia pityrodes to be placed in this class, but it stands out so prominently among those diseases causing baldness that for practical purposes it may be classed among the essential alopeciæ. Similar objections could be made against the placing of alopecia areata among the "idiopathic premature alopeciæ," and yet we find it there by the consent of many good authorities.)

The second class contains first, *alopecia toxica*, which includes those instances of alopecia caused by the use of drugs, like mercury and acetate of thallium and also those caused by the toxins of systemic infections such as syphilis, typhoid fever, etc.; second, *alopecia dynamica sive destructiva*, in which loss of hair is principally due to atrophy caused by mechanic force, such as pressure atrophy (lupus erythematosus), or to the destruction of tissue the result of suppuration (gummata, epitheliomata, sycosis, etc.), or to severe local inflammations (acute eczema, erysipelas, etc.); and finally, *alopecia neurotica*, which follows traumatic or functional nerve injuries.

The following represents a brief schedule of this classification:

I. *Alopeciæ Essentiales, Idiopathicæ sive Primariæ.*
   1. Congenita.
   2. Senilis.
   3. Prematura.

II. *Alopeciæ Symptomaticæ sive Secundariæ.*
   1. Toxica.
   2. Dynamica sive destructiva
   3. Neurotica.

I. Alopeciæ Essentiales Idiopathicæ Sive Primariæ.

1. Alopecia Congenita; Depilatio Congenita; Atrichia; Oligotrichia.

1. Congenital alopecia is a rare affection. It may be complete, the new-born babe being wholly devoid of hair, even of lanugo ones. After some time has elapsed, from a few months to a few years, let us say, lanugo hairs may begin to form, and later on, full-sized normal hairs may make their appearance. It may, however, be the case that growth of hair never takes place. This has been frequently found to be true where there was only a partial alopecia at birth In an instance like this the individual bald patches may multiply in number until they spread over the entire scalp, and they often show a tendency to increase in size.

In connection with this malady, anomalies of the teeth and nails are often observed. Crocker reports the case of an individual who who had only four molar teeth, and was never known to have perspired or shed tears.

Etiology.—Alopecia congenita represents one of the evidences of arrested development; there is a marked hereditary tendency, and more than one member of the same household may suffer from it.

Pathology.—Schede is apparently the only one who has published a complete microscopical examination of this disease (*Archiv für klin. Chir.*, Bd. xiv.). He found the sebaceous glands well developed, in many places sending their open ducts through the somewhat atrophic epidermis; in some of these, rudimentary hairs could be observed, in others the papillæ were merely indicated. The cutis surrounding this region was changed into a coarse areolar tissue interspersed with granules and fat cells.

The *prognosis* in the universal congenital alopecia is said to be not as bad as in the partial affection.

Treatment can only be hygienic, and is limited to aiding the general nutrition processes.

2. Alopecia Senilis; *Calvities Senilis.*—With the advent of old age, a loss of hair not only of the scalp, but also of the eybrows, the genital and the bearded region is observed. Women are not as extensively affected as men. While it is true that at the decline of human life an increase in the growth of hair is often seen, it is equally true that this growth never takes place upon the scalp.

As a rule the hair becomes gray before there is any sign of senile baldness, which begins upon the top of the vertex, at its junction with the occiput. The coarse hairs begin to fall out, at first from a small circular area only; this loss of hair spreads at the periphery, presenting a picture like the full moon shining through the clouds, and later on assuming the form of the tonsure of a friar. The disease spreads forward along the vertex, and descends laterally upon the temples and the region above the ears, and finally also invades the occiput. As a rule, it leaves a small rim of normal hair encircling the lower lateral and posterior parts of the scalp. The coarse hairs are replaced by lanugo hairs, but these also finally drop out. The scalp is then left as a smooth, shining surface, thinner and tenser than before, but still freely movable over the cranium. The mouths of the follicles may still be seen for some time, but they too shortly disappear

Pathological Anatomy.—The whole process is incidental to the retrogressive nutrition changes of senility. The prime factor is an obliterating endarteritis, which here means occlusion, lack of blood supply, atrophy, and death of these structures.

Treatment.—From the pathology of this condition it is plain that treatment is of no avail in averting the loss of hair.

3. Alopeciæ Prematuræ.—(*a*) *Alopecia Presenilis.*—When the symptoms of the last-described malady appear in younger persons who do not show any other evidences of the degeneration of old age, it is called "alopecia presenilis." Its course and pathology are the same as in the senile form, and therapeutic efforts are as useless. The wearing of stiff headgear, such as derbys and silk hats, is considered by some as a cause of this affection. They argue not only that the hard brims impede the circulation, by pressure upon the blood-vessels encircling the scalp, but that on account of their tight fit the air from expiration becomes so deteriorated as to be obnoxious. This factor may be remembered when a case presents itself. Invigorating treatment, and the avoidance of injurious diet and habits, may in some degree retard the progress of the disease. Active cell metabolism should be encouraged.

(*b*) *Alopecia Pityrodes sive Alopecia Furfuracea Capillitii.*—Our reasons for placing this affection among the essential premature diseases of the hair causing baldness have already been given. Its true nature is by no means definitely settled, as shown by the various designations given to it, *e.g. seborrhœal eczema, inflammatory seborrhœa, seborrhœal dermatitis*, besides those that are now obsolete, as, *seborrhœa sicca*, and *oleosa capitis, acne oleosa*, and others. It is one of the most frequent causes of bald-

ness. It is not confined to any particular age, but still is oftenest seen in persons who are at the end of the second, or at the beginning of the third decade of life. Women suffer from it more frequently than men. Elliot gives the relative frequency of the disease in the two sexes to be as five women to four males. Michelson states that women are *not* as often attacked as men.

One of the first conditions noticed by a patient is an increased scaliness of the scalp commonly known as dandruff. Associated with this is an obstinate itching, and a sensation of burning heat. The pityriasis increases as the years go on, when the sufferer complains that more hairs than usual fall out when combing. A woman will soon notice that her braids grow thinner at the ends, and that hairs commence to project from them. This phenomenon is due to the fact that the life duration of the individual hairs (a duration which, normally, is about four years) has become less than normal; therefore they do not attain the usual length.

The hairs taking the place of the shorter-lived ones grow, in the course of time, not only smaller, but also thinner. They lose their lustre and natural curliness, and finally are replaced only by lanugo hairs. An associated senile alopecia may hasten their disappearance. During all this time the dandruff increases in quantity, but at the appearance of the lanugo condition it stops suddenly, as if the disease had spent its energy. The pityriasis consists of whitish scales made up of epithelium, sebaceous matter, and dirt. According to the proportion of sebum in them, they may feel greasy or comparatively dry. The amount of dandruff is a good indication of the severity of the disease.

In addition to the sensations of itching, and heat, and headache, there is now experienced a feeling of tension all over the scalp. Michelson has observed increased perspiration in some cases at this period.

Although, strictly speaking, the loss of hair begins simultaneously over the whole scalp (Pincus, Michelson), there are certain areas that are more rapidly and more intensely invaded than others. As a rule, there are two principal centres of development, and both lie in the median line of the top of the head; the anterior one begins about one-half inch behind the border of the hair, and runs backward; the other one starts from the junction of the vertex and occiput, and progresses forward, so that there remains a bridge of hair between, which connects both parietal regions, and still remains even when the disease is far advanced; but it also finally breaks down. The occiput and lateral portions of the hairy scalp are not seriously attacked. The small bunch of hair in front of the anterior bald spot is also quite persistent. The anterior temporal regions, "the corners of the hair," may form two additional starting points.

Pathological Anatomy.—According to the description given by Pincus the epidermis is not thickened but made rather thinner than normal. Elliot (Morrow's "System of Genito-Urinary Diseases, Syphilis and Dermatology," vol. iii., 1894) has found processes of vacuolation in the epidermic cells, and infiltration with "Wanderzellen." The granular layer was seen to be slightly increased. The subcutis is the seat of marked inflammatory changes, as shown in the dense, small, round-cell infiltration which is arranged especially around the blood-vessels, particularly around those supplying the hair follicles and their papillæ. The hairs in themselves show nothing characteristic. They differ in no way from those that have undergone the process of physiological death, except that, in some instances the roots are smaller, atrophied, and have pointed ends, instead of showing the hollowed-out knob of the healthy hair. Increased brittleness may also be observed; but this probably occurs only in bad cases, and then only in the advanced stages of the disease. Later on, as evidences of a chronic inflammation make their appearance, the small round-cell infiltration is replaced by a dense network of fibrous tissue, which gives the feeling of tightness to the scalp, and prevents its being lifted up between the fingers. The subcutaneous fat is greatly increased in quantity.

Etiology.—Some diseases, such as syphilis, diabetes, typhoid fever, etc., are predisposing factors. French writers consider "arthritisme" as an important cause. Heredity also plays quite a rôle here. Any condition or malady that leaves the system in a weakened state must naturally be looked upon as furnishing a favorable chance for the invasion of the disease. Bad hygienic surroundings, defective cell metabolism, neglect of proper care of the scalp, general malnutrition, increased ingestion of sugars, loss of sleep—all of these have to be looked upon as probable predisposing factors. How really sensitive the hairs of the scalp are, is shown by the loss of their healthy lustre and oiliness after a single protracted dissipation, with its attendant loss of sleep and subsequent general depression.

Numerous are the organisms described by those who have attempted to verify the parasitic nature of the disease. Malassez considered his flask-shaped bacillus (called by Sabouraud "bacillus asciformis") as the cause of alopecia pityrodes. Unna holds that alopecia pityrodes is identical with his eczema seborrhoicum, and is caused by the morrococcus or mulberry coccus. Merrill, in connection with Elliot, has found a diplococcus with sufficient frequency to be able to attach to it some etiological importance (*New York Medical Journal*, 1895, vol. lxii). Sabouraud (*Annales de l'institut Pasteur*, 1897, and *Annales de derm. et de syph.*, 1897), after some painstaking experiments, believes that he has established the identity of some follicular affections hitherto regarded as separate diseases—*i.e.*, comedones, acne, seborrhœa, alopecia pityrodes, alopecia senilis, and alopecia areata. He describes a punctiform bacillus almost resembling a coccus, 1 μ in length and 0.5 μ in diameter. It has the power of penetrating deeply into the hair follicles and into the sebaceous glands, while, according to him, the flask-shaped bacillus of Malassez is confined to the funnel-shaped enlargement of the mouths of the diseased follicles. He sums up his explanation of the pathogenesis of alopecia pityrodes by stating that the presence of the micro-organism described by him first causes an irritation, and thus a hypersecretion of the sebaceous glands; then there follows a hypertrophy, and by further invasion, a progressive papillary atrophy, with malnutrition and atrophy of the hair-producing cells, hence death of the hairs that are formed, and cessation of the growth of new ones.

Right here it would seem appropriate to mention the fact that the parasitic theory of alopecia pityrodes was first advanced by Lassar and Bishop (*Monatshefte für praktische Dermatologie*, vol. i., 1882) after some experiments in which alopecia followed the inunction of a mixture of vaseline and finely cut hairs, taken from a typical case of this disease. In the case just mentioned alopecia appeared in the third week, and could be transmitted from the first series of animals to others. Michelson remarks that he was able to produce the same effects with rancid olive oil.

Saalfeld (Virchow's *Archiv*, 1899, vol. clvii.), repeated the experiments of Lassar and the bacteriological studies of Unna and Sabouraud. He was able, like Lassar, to produce a loss of hair, but not a typical alopecia pityrodes. He also succeeded in producing the same conditions with simple non-rancid oil, and even with the somewhat vigorous strokes of a brush. Using rancid oil, he obtained the same effects as Michelson. He has found micro-organisms which may be considered identical with those of Unna and Sabouraud, but he looks upon them as incidental. He was unsuccessful in proving that they produced alopecia pityrodes.

Diagnosis.—The disease may be readily recognized by its occupying usually the median portion of the scalp, the lateral and posterior parts being comparatively free, from the furfuraceous scales always present, in greater or less quantities, and from the sensations of itching and heat.

It is distinguished from senile, and more especially from presenile alopecia, in that these two forms begin upon the vertex of the head, while the anterior portions

are invaded much later. There is no pityriasis in these diseases, and the loss of hair is more rapid. Psoriasis does not attack the scalp as a whole. Its lesions are usually isolated and sharply limited; its scales are silvery and dry and come off in lamellæ; and it never attacks the scalp alone.

Eczema seborrhoicum is especially noticeable by the margin along the front of the hairs; this margin is more or less continuous, and covered with yellowish, greasy scales. As a rule, the chest and the back are affected at the same time. The diagnosis is sometimes impossible.

Alopecia syphilitica, while it may be seen all over the scalp, is, however, generally situated upon the sides and the occiput; often the external halves of the eyebrows and the eyelashes fall out.

Alopecia areata can hardly be confounded with alopecia pityrodes. Like the former it completely lacks the furfuraceous desquamation.

Pincus has called attention to the disproportion of the sharply pointed hairs (*Spitzenhaare*), those that are so small that in cutting the hair they escape the shears of the barber; and those which, on account of their length are clipped, and therefore present to view a dull-pointed end. If the proportion is as 1:8 of hairs of 13 cm. length, and as 1:10 in those having a length of from 5 to 8 cm., the shedding is abnormal; and this circumstance, in connection with the other symptoms described, gives the diagnosis of alopecia pityrodes. The way in which it is recognized in women has already been alluded to under the heading of Symptomatology.

Prognosis.—The disease is curable, but can only be combated by energetic and long-continued treatment which may last weeks, months, or even years. As it is not in human nature to spend the time and energy necessary for the cure of an affection where the damage done is simply an offence to the æsthetic, the disease as a rule, is permitted to run its regular course to the end, which is perhaps put off for a few years by intermittent attempts at treatment. Heredity, and the appearance of this form of alopecia in the earlier years of life, render the prognosis less favorable.

Treatment.—We will not enumerate all the remedies advised for the cure of alopecia pityrodes, but simply lay down the principles for its treatment, and cite one or two examples. Any other plans and methods advocated can then be readily appreciated by the reader. The first step must be to remove the pityriasis. This procedure removes at the same time a good many organisms, and by the mechanical force applied, massages the scalp, and hence helps to remove some of the inflammatory exudates. The next step is to apply some antiseptic medicament which should not only cover the scalp, but should also penetrate, if possible, into the hair follicles, so as to reach organisms situated there. Through the washings, and the applications of antiseptics which are usually dissolved in alcohol, the natural oil of the scalp will be removed. This must be replaced, and this replacing constitutes the third and last step of the treatment. An ointment having as a basis vaselin or lanolin is rubbed into the scalp. It is a good plan to add to this some antiseptic, so as to have the diseased parts in constant contact with a germ-destroying agent.

This treatment has to be repeated daily for from one to six weeks; then once every other day for a similar period of time; then three times a week; after that once a week, and this latter must be continued for a period of years for, as stated above, if the scalp is not treated energetically and persistently the disease is certain to recur. No method, however, can resuscitate the atrophied hair-producing structures; but the simply diseased ones may be restored to health, if treated before the changes are too far advanced.

Fifteen years ago Unna recommended a simple remedy, which, according to him, is attended with good results. It consists simply of an ointment of ten per cent. precipitated sulphur in unguentum pomadini. The hair is parted first in a sagittal, then in a coronal direction, the parts being a distance of about 1 cm. away from each other, and the salve is lightly spread along the furrows. This is done every night. The scalp is washed every three or four days to cleanse it from the scales and the salve. In the second week, or later, according to circumstances, the intervals between the applications become longer and longer, until finally treatment is stopped altogether after a cure is thought to have been obtained.

The method laid down by Lassar meets all the indications for treatment. The scalp is washed daily with a good tar soap for at least ten minutes, warm water being used at first, and the lather then rinsed off with cool, and finally with cold water. After this the hair and scalp are thoroughly dried—this is very important. Now a solution of one-half per cent. corrosive sublimate in equal parts of glycerin and rose water is used, being applied to the scalp with some friction. This is followed by the use of a solution of one-half per cent. of β-naphthol in absolute alcohol. As the parts are now completely dehydrated and poor in fat, the latter has to be replaced, and now any further antiseptic added is taken up very eagerly on account of the dehydration. Lassar recommends the following: ℞ Acidi salicylici, 16; Tincturæ benzoini, 3; Ol. bubuli, 100. In severe cases the corrosive sublimate solution may be used several times during the day. If there be a tendency to great greasiness of the scalp, resorcin of from three to five per cent. strength is suggested, instead of the β-naphthol or salicylic acid in the ointment; or, it may be added to the same, the percentage of the latter being then of course reduced accordingly. The combination of resorcin and salicylic acid is, besides, very appropriate from a pharmaceutical standpoint, for resorcin has the tendency, when used alone, and especially when combined with alkaline media, to turn red in color; a change which does not take place when in union with acids.

When the hair is very dry sulphur acts better than resorcin. Of course, when sulphur is used, the washing with corrosive sublimate is omitted. The sulphur in that case is incorporated into the pomade in combination with salicylic acid and also with resorcin, if we choose. As the greasy ointments are often objectionable to women, we may add the ingredients to a basis of a lower melting point than lard or vaseline; as, for instance, benzoinol or liquid albolene.

This treatment of the scalp must be repeated daily for at least one week, and, in more marked cases, for as long as six weeks; after this once every other day; then three times a week; and finally once a week will be sufficient, but this must be continued for months if necessary.

Alopecia Pityrodes Universalis.—Under this name Michelson (Ziemssen's "Handbuch der Hautkrankheiten") has described a variety of the former disease affecting all the hairy regions of the body. Kaposi had observed a similar condition in connection with seborrhœa. The disease may begin like a simple alopecia pityrodes affecting the top of the head, but soon the whole scalp becomes involved, and simultaneously, or a little later, all the hairs of the body begin to fall out; at the same time there is an abundant production of pityriasis in the parts affected. Lanugo hairs take the place of those that have disappeared, and in places the stumps of hairs that have been broken off may still be seen. This affection somewhat resembles a universal alopecia areata, but differs from it in the pityriasis present, and in the fact that the scalp is tense and tightly stretched over the cranium, while in alopecia areata it is thin and readily movable. A greatly debilitated system seems to lie at the bottom of this malady.

The prognosis is not unfavorable; the new hairs that grow in may be different in color from the old ones. The diagnosis is readily made, if it be remembered in what points it differs from alopecia areata. The pathology is essentially the same as that of alopecia pityrodes localis.

Michelson has noticed a peculiar brush-like deformity of the ends of the diseased hairs, a deformity which he attributes to the affected papillæ being unable to furnish