

Paper for Soap, Perfumery and Cosmetics  
Anthony C.Dweck  
Research Director and Herbal Archivist  
Peter Black Toiletries Ltd.,  
Cradle Bridge, Mortimer Street, Trowbridge, Wilts BA14 8BB

## UNUSUAL PLANTS FOR HAIR CARE

### INTRODUCTION

Plant materials can be used to remedy a number of hair and scalp complaints such as dandruff and itching scalp. They can also be used as hair colorants to reinforce the hair's own natural colour. Other plant materials are reported to prevent premature greying, reduce hair loss and even to stimulate hair growth.

A brief survey of some plants used for the treatment of dandruff is given. A few of the plants are quite obscure, and so do not have English names. It is impossible to mention all suppliers and all applicable plants, and apologies are given if a favourite plant or supplier has been omitted.

Also considered is the use of some plants as shampoo or soap substitutes. It must be remembered that plant saponins at high concentrations are likely to be a potential hazard, though the risks are greatly reduced in this rinse-off situation.

### PLANTS FOR THE TREATMENT OF DANDRUFF

#### **South America**

Siri van Reis & Frank J. Lipp1 report a number of interesting possibilities in their book.

*Baccharis polyantha* (Family: Asteraceae). In Ecuador, the roots are ground and mixed with water to form a shampoo to eliminate dandruff. Also used in Colombia is found *Meriania splendens* (Family: Melastomataceae) where the flowers are placed in cold water and allowed to steep for three days. After this time the water is poured off and used directly as a rinse (the bark is also used but is somewhat less efficacious).

Two other plants from Ecuador are mentioned. The tuber root of *Neptunia indet* (Family: Mimosaceae) is beaten and used as a soap to cleanse the hair. Another soap substitute is *Monnina salicifolia* (Family: Polygalaceae), where the bark of the roots are used as a shampoo. Both are reported as very good for removing dandruff.

In a data sheet from Kampoyaki Herb (through Honeywill and Stein) on rainforest herbs, we read of Pejibaye or *Bactris gasipaes* Kunth. extract and oil. The parts used are the fruits. It is recommended for anti-dandruff shampoos and shampoos and conditioners for dry hair.

#### **China**

Leung refers in an article<sup>2</sup> to Baizhi, where the root of Dahurian angelica or *Angelica dahurice* is used. He also mentions Gaoben, where the rhizome or root of *Ligusticum jeholense* is employed.

Another data from Kampoyaki Herbs on Chinese herbs tells of Kui Li or Oriental Maiden Hair (*Trichomanes japonica*). The whole herb with the roots is used. Kui Li is used in oriental folk remedies for its circulation and stimulating action on the scalp and hair regenerating properties. Action against dandruff is also reported.

Another Chinese material is mentioned in a data sheet from Maruzen Pharmaceuticals (through Gemro Chemicals) where we read that *Sophora flavescens* is Kujin. It is used as a household medicine, and a decoction of sophora is used for exterminating hair lice and other noxious parasites. It is also used for hair tonics, for hair growth promotion, and to nourish the hair. It is listed in the Japanese Pharmacopoeia for these purposes and also for its beautifying and fairing effect.

Another plant is found in the recent additions. This is known variously as Nu Chen, Tung Ching Shu, Chuan Hsiang, Hsiung Chuan Senkyu, Senkiu, Japanese Chastity Flower Tree or *Ligustrum lucidum*. In a data sheet from Kampoyaki Herbs through Honeywill & Stein, we read that the fruits and flowers are used. Nu Chen is used for the regeneration of a youthful sheen to the hair, and is effective in the stimulation and promotion of circulation in the scalp. They claim that good results can be obtained, with regular use, against dandruff and greasy hair. They also claim that this extract will improve the structure of the hair.

Kampoyaki Herbs score again with Oriental Bramble, Wu Pao, Wu Lung Pai Wei, Piao Peng Li or *Rubus thunbergii* Hance. (Syn. *Rubus terhordes*) where the berries are used. In shampoos especially formulated for dandruff, the activity of the scalp is stimulated and normalised.

If we were not already spoilt for choice, Kampoyaki Herbs refer to an extract prepared from the seeds (75%), leaves and flowering leaf stalks (25%) of Wu Tung, Moon Cake Seeds Tree, Japanese Cosmetic Tung Tree or *Sterculia platanifolia* Hook (Syn. *Mallotus apelta* Lour.) .

This is used for loss or thinning of hair, dandruff, and also has a reputation for removing grey hair and restoring healthy black hair with excellent sheen. Used in daily hair wash and other wash preparations, especially for dandruff and greasy hair conditions.

Another data sheet from Kampoyaki Herbs refers to *Polygonum multiflorum* Thunb. or Ho Shou Wu (Fo-Ti) where the cured roots are used. It is suitable and effective in hair care products for normalising greasy hair and as a specific in dandruff.

In a data sheet from Maruzen Pharmaceuticals we read that *Phellodendron amurense* is listed in Shin Neh Pen Tsao king as a middle class drug and has been used internally as well as externally since olden times as a bactericide and antiseptic. It can be used in hair shampoos to help prevent dandruff and itching from the presence of microorganisms on the scalp.

## Europe

Phillips and Foy<sup>3</sup> say that *Knautia arvensis* or Field Scabious is a perennial herb, native to Europe, which has been used traditionally for dandruff and scurf.

Levy<sup>4</sup> says that the Field Scabious or Gypsy Rose (*Scabiosa arvensis*) brewed as the whole herb, including the root, and thickened with borax, will remove dandruff.

Palaiseul<sup>5</sup> refers to a German cure for dandruff, namely, Boxwood or *Buxus sempervirens*. This is prepared as a daily friction by macerating 50g of finely chopped fresh leaves in 500ml alcohol, allowing it to steep for 10-15 days, and then filtering and perfuming the final extract.

Back<sup>6</sup> says that catnep or *Nepeta cataria* is a perennial from which a decoction of the flowering tops is said to be effective.

Sage or *Salvia officinalis* is an old favourite for dandruff, loss of hair, fatty hair and skin. An extract of sage massaged into the scalp will control dandruff, falling hair or loss of hair if the papilla is dormant and not destroyed.

Conway<sup>7</sup> says that cleavers or *Galium aparine* is a first rate tonic for the scalp, which it clears of dandruff. Gordon<sup>8</sup> confirms this remedy.

A number of data sheets from suppliers such as Rahn, Plantextrakt (through Aston Chemicals) and William Ransom recommend an old favourite, namely, The Stinging Nettle or *Urtica urens* which has been used for generations to care for the scalp, especially against dandruff and sebaceous hair conditions. Levy<sup>4</sup> agrees with these comments and adds that in addition it will improve the colour and texture of the hair.

Another old favourite recommended by Grieve<sup>9</sup>, is Rosemary or *Rosmarinus officinalis*, which she says will also prevent premature baldness, and is often combined with borax to prevent scurf and dandruff. Ceres<sup>10</sup> in their book agree with these comments, as do Price<sup>11</sup>, Leung<sup>12</sup>, and Evans<sup>13</sup>. Back<sup>6</sup> adds that it is an excellent herb for the hair, stimulating the circulation of the scalp and thus helping to get rid of dandruff and to improve the growth and condition of the hair. William Ransom refer to the plant as Dew of the Sea, which is not a synonym I have not seen before. They say that it is also a conditioner for greasy hair, a rinse for brunettes and a tonic that gives body and sheen.

In an article by P.Alexander<sup>14</sup>, we read of Coltsfoot or *Tussilago farfara* being used and this is confirmed by Back<sup>6</sup>, who says that it can be used in mild cases of dandruff.

A data sheet from Maruzen Pharmaceuticals records that the roots of *Geranium thunbergii* are used to prepare an extract that prevents dandruff and also prevents hair loss.

Howard<sup>15</sup> reports that *Adiantum capillus-veneris* or Venus Hair, Lady's Hair or the Maiden Hair Fern is used. Culpepper<sup>16</sup> says that a related species Golden Maidenhair or *Adiantum aureum*, is recommended as a scalp treatment and is boiled in water and used to wash the hair to prevent thinning. The White Maidenhair is *Asplenium ruta muraria* and has similar properties, the leaves being used for scalp problems, such as excess scurf.

William Ransom remind us that the use of Willow or *Salix alba* is quite useful in a shampoo for dandruff.

Weiss<sup>17</sup> says that little is known about the constituents of Burdock or *Arctium lappa*, but that the oil is used to stimulate hair growth in alopecia. Dry seborrhoea (dandruff) responds to burdock root oil massaged into the scalp. Back<sup>6</sup> recommends that for dandruff and falling hair apply the lotion daily, massaging gently into the scalp. Do not use if the scalp is sore or irritated, or if there is persistent dandruff. A data sheet from Maruzen confirms these recommendations.

In an article by S.K.Scher<sup>18</sup>: Botanicals - Myth or Reality. Cosmetics and Toiletries 106, June 1991, we read of *Usnea barbata* or Alpine Lichen. The plant is seen as fine threads hanging from trees on the slopes of the Alps. The active ingredient is usnic acid which can be utilised in shampoos, and anti-dandruff agents.

In a data sheet from William Ransom and also in the book by Genders<sup>19</sup> we read that Thyme or *Thymus vulgaris* is a stimulating skin tonic and gentle antiseptic cleanser. It inhibits dandruff, and when used in a scalp rub it prevents falling hair.

Leung<sup>12</sup> says that garlic *Allium sativum* can help to control dandruff and this rather unpleasant idea is also confirmed by Back<sup>6</sup>, who adds that it is a good herb for improving the hair and stimulating its growth, while the lotion will help prevent dandruff.

Back also mentions Horsetail or *Equisetum arvense*, and says that a hair lotion made of this herb is effective in mild cases of dandruff when used as a final rinse. Used on a regular basis it will keep the hair healthy and strong. Treben<sup>20</sup> says that the horsetail rinse should be used once a day and followed up with a scalp massage using a good quality olive oil.

Another interesting plant is Walnut or *Juglans regia*, and in a data sheet from Rahn we learn that it is used on eczema, acne, loss of hair and dandruff. Lust<sup>21</sup> refers to *Juglans nigra* as Black walnut, where the bark is used for dandruff and other scalp problems.

## **United States of America**

Dr. Arnold Pike<sup>22</sup> in his article reported the ancient and traditional use of yucca. The Southwest Indians believed that shampoo made from yucca stimulated hair growth and controlled dandruff. This is confirmed in a data sheet from Paroxite (agents for Calgene Chemicals), where we read of Agrofoam 50, which is a concentrated natural saponin extract of the Mohave Yucca plant (*Yucca schidigera*), and is native to the Southwestern deserts of North America. The Kiowa Indians used the roots of the soaproot mixed with water for washing their hair and for removing dandruff.

Bloomfield<sup>23</sup> in his book discusses how Jojoba or *Simmondsia chinensis* can be used in cases of a number of skin conditions and can also be used in hair care. This might be a more pleasing application than the olive oil mentioned earlier. Considerable information has been written on Jojoba in previous articles and will not be reiterated here.

## **India**

In a data sheet from Folicon (through CPL Fragrances) we read of Henna or Mehendi (*Lawsonia alba*) as being a conditioning agent for the hair, and also used as a powerful anti-dandruff agent. It is also reputed to accelerate hair growth. The traditional use of henna is normally associated with its use as a hair dye.

Information from Ikeda (through S.Black) tells us that Camellia oil is prepared from the seeds of *Thea sasanqua* nois (*Camellia Sasanqua* Thumb). It has been used for hair care treatment in Asia for many years. The hair is protected by sebaceous membrane secreted from the scalp against dryness and germ infection. However, this sebaceous membrane is destroyed by oxidation and germ infection, causing dandruff and itchiness, so damaging the hair. Camellia oil has a similar

composition to sebum and can replace this natural sebum lost through shampooing, by massaging the oil into the scalp after washing the hair.

Campo Research Systems (formerly Kampoyaki Herbs through Honeywill and Stein) on Indian medicinal herbs inform us of Balada Turagogandha or *Withania somniferum*, a member of the family Solanaceae, in which the flowers are used. It is also known as Hair Flowers tree, and Asvaganha or Vijaya Kala Gandha in Sanskrit. It is good for the circulation of the scalp, improving the structure of the hair, and is used in preparations intended for preventing greasy hair and dandruff.

## **Australia**

There a number of very recent plants that have come onto the market through Honeywill & Stein, such as the Narrow-Leaf Fuchsia bush, Irmangka (which is the Aborigine name) or *Eremophila alternifolia*, where the leaves are used. In hair care, hair loss and dandruff have been empirically noted as being remedied.

In a data sheet from Honeywill and Stein (Campo Research Systems), we read that the seeds are used of the Desert Mulea, Wintalyka Kurku (which is the Aborigine name) or *Acacia aneura*. It is particularly useful in shampoos for dandruff, when the scalp is stimulated and normalised by its addition.

## **NATURAL SOAPS**

### **India**

An interesting plant is Soap Nut or *Sapindus trifoliatus* (Family: Sapindaceae) with the Sanskrit name: Aristaka and Hindi name: Ritha. One fruit in forty parts of water provides a hair wash which promotes the growth of hair and removes dandruff. The Indian name may also be spelt Reetha. Unlike the soaps produced by pharmaceutical or cosmetic companies, the substance taken from this fruit does not have a high acid content. Using the soap nut as a base, Indian women concoct their own shampoos, frequently mixing it with a medicinal combination of three myrobalans or other ingredients such as turmeric or coconut pulp. A soap-nut shampoo rinses out the colours used in special festivals, while conditioning the hair and the scalp at the same time.

In a data sheet from Honeywill and Stein (from M/S Hari Industries, Baggi, India) we read of Saponin soapnuts or *Sapindus mucarossi*. The saponin is obtained as a creamy crystalline substance from the pericarp of soapnuts. It can be used in the manufacture of soapless shampoos.

### **China**

There are a variety of these natural soaps, for example Soapberry or *Sapindus indica*. Another is Chinese Soapberry or Soapnut otherwise known as *Sapindus detergens* Roxb. or *Sapindus mukurossi* Garten. Lust<sup>21</sup> refers to the plant but has no further reference. Manning<sup>24</sup> says that Soapberry is also known as *Sapindus marginatus* contains saponin and the fruit pulp used as a substitute for soap.

Trease and Evans<sup>25</sup> say that the Sapindaceae are a family of about 150 genera and 2,000 species; tropical and subtropical. Genera include Paullinia (180 spp), Sapindus (13 spp), Cardiospermum (12 spp), Eriocoelum, Blighia and Radlkofera.

## **Chile, Peru**

Soap Tree, Quillaia, Soap bark, Panama Bark, Cullay, Murillo Bark or *Quillaja saponaria* is used in South America as a soap substitute. It is also used according to Leung<sup>12</sup> in hair tonic preparations and shampoos for treating dandruff. It is also used to relieve itchy scalp or dandruff, a statement endorsed by Duke<sup>26</sup>.

## **Europe and the UK**

*Saponaria officinalis* or Soapwort is the European equivalent to the materials and was frequently used in shampoos. Potter<sup>27</sup> says that it is also known as soaproot. The leaves and roots are used as an alterative and detergent. It is used as a remedy for scrofula and skin diseases generally.

Levy<sup>4</sup> says that even in modern times the plant is much used in expensive toilet articles, such as hair shampoos and hand lotions. Level<sup>28</sup> says the herb contains a mucilaginous juice that will lather in hot water and is used in shampoos to wash the hair.

In the Lawrence review of natural products (Nov 1989 updated July 1993) we read that its chief use today is as a source of natural saponins to be used in the making of "natural" soaps and shampoos. These soaps are extracted from the rhizomes and leaves of the plant.

## **PLANTS AS CONDITIONERS**

In most cases, plants are not substantive to hair in the same way as quaternary conditioners, however, the use of oils from plant sources would have benefit in dry hair conditions.

## **PLANTS AS LACQUERS**

The gums and resins possessed in plants are not sufficiently strong to act in hair sprays, and the nearest natural equivalent would be shellac. The author would love to hear from any supplier who knows of a suitable material.

## **REFERENCES**

1. Siri van Reis & Frank J. Lipp: New Plant Sources for Drugs and Foods from the New York Botanical Garden Herbarium. Havard University Press. 1982. ISBN No. 0-674-61765-7.
2. Leung, A.Y.: Cosmetics made from Chinese herb extracts. DCI April 1989, p.35-40.
3. Roger Phillips & Nicky Fox. Herbs. Pan Books. 1990. ISBN No. 0-330-32600-7.
4. J.de Bairacli Levy: The illustrated herbal handbook for everyone. 1991 4th edition. Faber and Faber. ISBN No. 0-571-16099-9.
5. Palaiseul, J.: Grandmother's Secrets - her green guide to health from plants. (Translated from the French by Pamela Swinglehurst). Penguin Books. first published 1972, this copy 1986. ISBN No. 0-14-046229-5.
6. P.Back. The Illustrated Herbal. 1987. Hamlyn Publishers through Octopus Books printed in Hong Kong by Mandarin. ISBN No.0 600 553 361
7. D.Conway: The Magic of Herbs. 1975 Readers Union published Jonathon Cape Ltd, ISBN No. unknown.
8. L.Gordon: A Country Herbal. 1980 Webb and Bower (publishers) Ltd. ISBN No.0-906671-09-4

9. M.Grieve: A Modern Herbal. 1984 Savvas Publishing. ISBN unknown.
10. Ceres: The Healing Power of Herbal Teas. 1984 Thorsons Publishers, ISBN 0-72251578-8
11. S.Price: Practical Aromatherapy. 1987 Thorsons Publishing ISBN 0-7225-1525-1
12. A.Y.Leung: Encyclopedia of Common Natural Ingredients used in food, drugs and cosmetics. John Wiley 1980 ISBN No. 0-471-04954-9
13. M.Evans: A guide to herbal remedies. C.W.Daniel. 1990 ISBN No. 0 85207 221
14. P.Alexander: Nature's Store. Manufacturing Chemist October 1990, p33-40.
15. M.Howard: Traditional Folk Remedies, A comprehensive Herbal. Century paperbacks. 1987. ISBN No. 0-7126-1731-0.
16. D.Potterton (ed): Culpeper's Colour Herbal. 1983. W.Foulsham ISBN 0-572-01152-0
  
17. R.F.Weiss. Herbal Medicine. (translated from the 6<sup>th</sup> German edition of Lehrbuch der Phytotherapie by A.R.Meuss). The Bath Press 1986. ISBN 0-906584-19-1.
18. S.K.Scher: Botanicals - Myth or Reality. Cosmetics and Toiletries 106, June 1991.
19. R.Genders: Flowers and Herbs of Love. 1978 Longman and Todd ISBN 0-232-51409-7
20. Treben, M.: Health from God's Garden, herbal remedies and glowing health for well-being. 1987. Thorson. ISBN No. 0-7225-1476-X.
21. J.Lust: The Herb Book, 1986, 16th. impression, Bantam Publishing. ISBN 0-553-17273-5
22. Dr. Arnold Pike: "The Healing Properties of Yucca", August 1990. Lets Live p.40.
23. F.Bloomfield: Miracle Plants. Jojoba and Yucca. Century Publishing. 1985. ISBN No. 0 7126 1008 1
24. S.A.Manning. Systematic Guide to Flowering Plants of the World. Museum Press. 1965. No ISBN No.
25. W.C.Evans: Trease and Evans, Pharmacognosy. 13th edition. Balliere Tindall ISBN 0-7020-1357-9
26. J.A.Duke: CRC Handbook of Medicinal Herbs (the CRC Press inc., Boca Raton, Florida)
27. R.C.Wren: Potter's New Cyclopaedia of Botanical Drugs and Preparations, 1985 8th impression, published C.W.Daniels. ISBN 0-85032-009-7
28. C.F.Leyel: Herbal Delights. 1987 Faber and Faber ISBN 0-571-14850-6