Fougère in Perfumery

Fougère in Colognes, Cosmetics and Soaps, and in Men's Fragrances

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Usually, a new perfume appears on the market first as a fine fragrance, and only later it is modified for cologne, cosmetic and soap fragrances.

Fougère (fern) is an exception. The perfume was originally developed for soap. Then it was adapted for use as a fine fragrance, and for cologne and cosmetic perfumes. Still later it was used as a men's fragrance.

In a previous article[1] we discussed fougère compounds for fine fragrances. The current article will present other types of fougère compounds.

Fougère Compounds for Cologne and Toilet Water

In developing perfume compounds for colognes or toilet waters, the perfumer has to select components that are soluble in 70-80% alcohol. Terpeneless oils are used to advantage.

In the course of time, the classical Eau de Cologne was modified. Various floral and non-floral compounds were added. Here is an example of such a cologne compound.

Eau de Cologne a la Fougère[2]

400	Bergamot terpeneless
300	Coumarin
100	Lavender absolute
40	Geranium Algerian terpeneless
60	Carnation synthetic
200	Amber synthetic tincture
92	Violet synthetic
8	Oakmoss
1200	

In toilet water the percentage of the perfume oil is usually lower than in a cologne (1-2% vs. 3-5%). These concentrations have steadily increased over the years.

Here are a few examples of more complex conventional fougère compounds for toilet water.

Fougère No. 377 (for toilet water)[3]

150	Spike lavender
60	Linalool
75	Linalyl acetate
80	Citronellol
60	Terpineol
10	Citral
20	Citronellal
40	Geranium African
50	Sandalwood
50	Oakmoss resinoid
30	Patchouly
73	Ionone
30	Cananga Java terpeneless
50	Toncarine L.G. (methyl coumarin)
30	Bourbonal H&R (ethyl vanillin)
70	Heliotropin
30	Labdanum resinoid
15	Styrol
50	Musk ambrette
10	Cresyl phenyl oxide P&S
2	p-Cresyl phenyl acetate
15	Benzophenone
1000	

This is the second of two Anonis articles on fougère in perfumery. The January/February 1994 issue discussed fougère in fine fragrances.

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Fougère No. 21 (for toilet water)

150	Coumarin
140	Lavender 40%
90	Bergamot
90	Geranium African
60	Amyl salicylate
60	Petitgrain Paraguay
40	Linalyl acetate
30	Phenyl ethyl alcohol
30	Musk xylol
30	Tolu balsam
20	Ionone
20	Benzoin resinoid
15	Oakmoss liquid decolorized
15	Cloves
15	Labdanum resinoid
10	Anisic aldehyde
185	Solvent
1000	

Fougère Compounds for Cosmetics

The following is an example of a conventional fougère compound for cream.

Fougère No. 220 (for cream)[4] (Fougère Royale type)

70	Extrodor Oakmoss H&S
275	Lavender Mont Blanc Barr.
70	Bergamot
35	Neroli synthetic
278	Vetiver Bourbon
70	Musk ambrette
50	Coumarin
17	Patchouly
10	Heliotropin
35	Anisic aldehyde
50	Amyl salicylate
15	Amber synthetic
25	Musk ketone
1000	

Perfume compounds for powder usually contain a larger amount of fixatives. In fougère compounds, coumarin or Tonka resinoid, vanillin or ethyl vanillin, synthetic musks, amyl benzoate or amyl salicylate, isobutyl benzoate, benzyl isoeugenol, anisic aldehyde and amber synthetic serve as fixatives.

Of the naturals, labdanum, oakmoss and styrax resinoids may be mentioned. In order not to modify the color of the powder, decolorized resinoids are mostly used.

Here are a few examples of conventional fougère compounds for powder.

Fougère (for powder)[5]

200	cm^3	Lavender
200	"	Linalyl acetate
50	"	Isobutyl benzoate
50	"	Amyl benzoate
25	"	Thyme oil terpeneless
125	"	Oakmoss
50	"	Petitgrain
5	"	Violet leaf oil
20	"	Clary sage
25	"	Amyl salicylate
50	g	Tonka resinoid

Fougère No. 434 (for powder)[6]

200	Lavender concrete
100	Methyl ionone
100	Vetiver Bourbon
70	Oakmoss resinoid decolorized
100	Linalool
50	Linalyl benzoate
30	Neroli synthetic
15	Patchouly
50	Toncarine L.G. (methyl coumarin)
95	Amyl salicylate
40	Anisic aldehyde
50	Styrax natural (filtered)
30	Labdanum resinoid
20	Bourbonal H&C (ethyl vanillin)
50	Musk ambrette
1000	

Fougère Compounds for Soap

The base of fougère compounds for soap usually consists of lavender, lavandin or spike lavender, oakmoss and coumarin.

Cinnamic alcohol, synthetic jasmin and rose (or their components), methoxy acetophenone, synthetic neroli (or petitgrain), elemi resinoid, geranium, rosemary and thyme may be added for rounding out and nuances.

Bergamot, terpinyl acetate and linalool are used for the top note.

Amyl salicylate, dimethyl hydroquinone, heliotropin, nitro musks or other synthetic musks and vanillin serve as fixatives. Among natural fixatives are the following: cedarwood, sandalwood; benzoin, elemi, labdanum, olibanum and opoponax resinoids; synthetic civet, patchouly and vetiver.

The prototype of fougère compounds was Fougère Royale (Houbigant, 1882), first used in soap. Since then, various modifications of fougère compounds for soap were developed. For example, angelica root, cardamon and coriander contributed special odor effects to the known fougère-hay type "Heno del Prado" soap.

The following conventional fougère compounds for soap may serve as examples.

Fougère No. 597 (for soap)[7]

200	Lavender synthetic
160	Bergamot synthetic
32	Coumarin
50	Vanillin
75	Jasmin synthetic
50	Rose synthetic
60	Sandalwood W.I.
25	Vetiver Bourbon
30	Oakmoss resinoid decolorized
30	Petitgrain Paraguay
40	Labdanum resinoid
24	Olibanum resinoid
50	Amber synthetic
10	Civet synthetic
164	Terpineol
1000	

Fougère No. 598 (for soap)[8]

50	Oakmoss resinoid
80	Coumarin
120	Heliotropin
150	Lavender French
120	Bergamot
100	Citronellol
330	Terpineol
30	Anisic aldehyde
20	Moskène L.G.
1000	

Fougère I (for soap)[9]

250	Lavandin
80	Bergamot synthetic
90	Neroli synthetic
300	Cedarwood
30	Patchouly
60	Coumarin
10	Heliotropin
70	Amyl salicylate
90	Oakmoss resinoid
20	Musk xylol
1000	

Fougère II (for soap)[10]

120	Lavender spike
75	Thyme oil
35	Patchouly
40	Neroli synthetic
200	Amyl salicylate
25	Heliotropin
60	Cinnamic alcohol
100	Coumarin
70	Diphenyl oxide
100	Benzoin resinoid
170	Terpineol
995	

Fougère No. 33 (for soap)

100	Cedarwood
60	Terpinyl acetate
40	Benzyl acetate
40	Oakmoss resinoid
40	Lavender
40	Elemi resinoid
40	Coumarin
40	Amyl cinnamic aldehyde
20	Petitgrain

20	Bornyl acetate
20	Amyl salicylate
20	Patchouly
20	Musk ambrette
500	

Fougère in Men's Fragrances

The odor characteristics of fougère—derived from lavender, earthy notes and coumarin, with an addition of woody notes—are well suited for men's line fragrances. The following two simple conventional compounds may serve as examples.

Fougère No. 41

140	Geranium Bourbon
100	Lavender
100	Vetiver
50	Coumarin
50	Amyl salicylate
40	Cananga
10	Patchouly
490	

Fougère No. 52

115	Geranium Bourbon
100	Linalool
85	Lavender
75	Coumarin
30	Patchouly
25	Methyl salicylate
25	Amyl salicylate
20	Musk ketone
15	Vetiver
50	Solvent
540	

More complex compounds may contain oakmoss, sandalwood, methyl ionone, synthetic jasmin (or its components), cloves (or cinnamic alcohol), bornyl acetate (or pine oil).

Among top note components are bergamot, linalyl acetate and lemon. Among the trace components, coriander, clary sage and cedarleaf may be used. Labdanum and styrax resinoids, and synthetic civet serve as fixatives.

More modern variations of men's line fougère compounds may include isobutyl quinoline, and aromatics of jasmin and muguet odor tonalities, such as Hedione (Firmenich) and Lilial (Givaudan-Roure).

Dermatological Considerations

Several previously used perfume materials cause dermatological problems. In accordance with the International Fragrance Association (IFRA) guidelines, bergamot, cinnamic alcohol, musk ambrette and oakmoss are restricted in percentage; opoponax and styrax have to be specially processed; methyl coumarin and styrol have been completely eliminated.

Additional Perfume Materials

In developing modified versions of fougère compounds, several newer aromatic chemicals may be used. Among such are the following:

Citrus

3,7-trimethyl-2,6-octadiene nitrile, known as Citralva (IFF), (lemon note)

trans-2-undecanal (lemon note)

2,6-dodecadienal (mandarin-orange note)

dihydromyrcenol (lime-herbaceous note)

thioterpineol (lime note)

Green

cis-3-hexenol (grassy-green note)

cis-3-hexenyl formate (green stem note)

cis-3-hexenyl salicylate (mild green note)

isobutyl methoxy pyrazine, present in petitgrain (green-metallic note)

octylic and decylic nitriles (green-metallic note)

ocimen epoxide (green-resinous note)

dihydroxypentadienyl acetate (green-floral note)

Herbaceous

dimethyl heptanol, known as Dimetol (Givaudan-Roure), (herbaceous-floral note)

2,5-dimethyl hepten-5-ol-2 (lavender-floral note)

trimethylcyclohexyl acetate (lavandin note)

theaspirane (herbaceous-spicy note)

Lichenous

β-resorcyclic acid,3,6-dimethyl:methyl ester, known as Veramoss (IFF), (oakmoss note)

Woody

cyclodecyl methyl ether, known as Palisandin (H&R), (cedarwood-musk note)

acetyl octahydro tetramethyl naphthalene, known as Iso E Super (IFF), (woody-amber note)

methyl cedrenyl ketone, known as Vertofix (IFF), (woody-musk note)

trimethylcyclotetradiene epoxide, known as Cedroxide (Firmenich), (woody-powdery note)

cedryl methyl ether, known as Cedramber (IFF), (woody-amber note)

Application

Fougère Royale (Houbigant, 1882) was the first French fragrance in this odor tonality. Unlike other early fantasy perfume types such as Quelques Fleurs, l'Heure Bleue, Chypre or Chanel No. 5, Fougère Royale was initially developed for soap. Only later was it adapted to fine fragrance, toilet water and cologne.

Fougère also found application in cosmetics, toiletries and men's line fragrances. Various fougère compounds were developed for cream and powder. Fougère was a well-liked odor (along with pine, eau de cologne and lavender) in bath salts. Fougère was used as a fragrance in hair oils for men.

It is interesting to note that the Maori people, who arrived in New Zealand from Polynesia about 1000 years ago, used fern (fougère), among other plants, in perfumery.[11]

Today fougère has lost its appeal as a cosmetic perfume, but it endures as a soap perfume. Fougère soap (Caswell-Massey) is an example.

However, fougère remains an important odor type in perfumery. Fougère is listed as one of the perfume families in the genealogies of feminine and masculine perfumes (H&R, P. Woerner).

Fougère has inspired several variations in women's and men's fragrances. Canoe (Dana, 1935), Brut (Fabergé, 1964), and Paco Rabanne (Rabbane, 1973) are among the better known further developments of the fougère note in men's fragrances. Variations of the fougère odor tonality in women's fragrances were discussed in a previous article.[1]

References

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