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VARNISHES General

- <http://cameo.mfa.org/wiki/Varnish>
 - Any transparent protective or decorative coating. Varnishes are composed of a resin dissolved in a liquid which dries to form a hard glassy film
- Varnishes fall into two categories:
 - **1. Oil-based varnishes**
 - Resin dissolved in oil, such as linseed or spike lavender
 - **2. Spirit varnishes**
 - Resin dissolved in solvent or spirit, such as alcohol or turpentine
- TURPENTINE (OIL) [distilled turpentine, oil of turpentine]
 - NJR summary: pine resin (tree resin i.e. oleoresin), obtain a liquid (oil of turpentine) and a solid (rosin/colophony)
 - [Making Turpentine and Rosin from Pine Sap](#) YouTube video by What Dennis Does
 - Not the greatest or most educational video, but gives a rough visualization of the distillation process for “oil of turpentine”
 - NEED to find better video
 - Also came across this article with explanatory cartoons (not super helpful, but interesting nonetheless): [Forgotten Characters from Forest History: Turp and Tine](#)
 - [http://cameo.mfa.org/wiki/Turpentine_\(oil\)](http://cameo.mfa.org/wiki/Turpentine_(oil))
 - A volatile, flammable liquid used for thinning oil paints. Turpentine is obtained as the steam distillate from the thick resinous extract from coniferous trees (gum turpentine). The crude resin contains about 65 percent rosin (solid residue) and 18 percent oil of turpentine. The volatile distillate, or oil of turpentine, is a mixture of cyclic monoterpene hydrocarbons, with the major component being pinene.

- The best quality turpentine is fresh, clear and thin. Turpentine thickens and yellows with age; moisture can cause cloudiness in varnishes. Three major grades of turpentine are:
 - Pure Gum Spirits of Turpentine (double distilled, rectified) is pure, and without water. This is the grade of turpentine used by artists.
 - Wood turpentine is made from ground or chipped pine wood.
 - Sulfate turpentine is obtained as a byproduct of the paper pulping industry.
- Synonyms and related terms:
 - spirits of turpentine; esencia de trementina (Esp.); huile de terebenthine (Fr.); essence de térébenthine (Fr.); Terpentinol (Deut.); gum spirits; wood turpentine; gum turpentine; olio di trementina (It); acqua ragia (It); turpentine; oil of turpentine (before WWI); turps
- VENICE TURPENTINE/ LARCH TURPENTINE
 - http://cameo.mfa.org/wiki/Venice_turpentine
 - A thick viscous exudation from the Austrian larch tree, *Larix decidua*. Venice turpentine contains 63% resinous acids, 20% terpenes and 14% resins.
 - Synonyms and related terms:
 - "Larix decidua; trementina de Venecia (Esp.); trementina veneta (It); larch turpentine; Venetian turpentine "
- BALSAM
 - <http://cameo.mfa.org/wiki/Balsam>
 - An oleoresinous exudate from Coniferae trees, especially of the *Pinus* family... The exudate is a soft, semi-liquid consisting of terpenes of resinous character and a large amount of essential oils. Upon distillation, a liquid portion, called turpentine, and a solid residue, called rosin, are produced.
 - Examples:
 - Venice turpentine, Strasbourg turpentine, Canada balsam, and copaiba balsam
- ROSIN/COLOPHONY
 - The solid, resinous residue left after the distillation of turpentine (oil) from balsam. The balsam exudate or gum thus, is usually from the longleaf pine (*Pinus palustris*), Cuban pine (*Pinus caribaea*), loblolly pine (*Pinus taeda*), cluster pine (*P. pinaster*), or Scotch pine (*P. sylvestris*). Rosin, also called colophony, is a brittle, clear resin with a color ranging from yellow or reddish-brown. It becomes sticky when warm and has a faint pine-like odor. Primarily composed of abietic acid (about 80%)
 - Synonyms and related terms:
 - Rosin; colophony; colofonia (Esp.); colophane (Fr.); colofonia (It); Greek pitch; wood rosin; sound glue; balsam; gum thus; pine resin; yellow resin; abietic anhydride; violin rosin; colophonium; gum rosin "
- RESIN
 - <http://cameo.mfa.org/wiki/Resin>

- A solid or semisolid amorphous organic material. Resins are usually high molecular weight materials that fracture conchoidally. Natural resins are clear to translucent brown exudates obtained from trees or insects, such as copal, rosin, sandarac, mastic, dammar, or shellac. Most natural resins are soluble in alcohols, ethers, and carbon disulfide, but insoluble in water.
- Synonyms and related terms:
 - résine (Fr.); resina (Esp.; Port.; It.)
- GUM
 - <http://cameo.mfa.org/wiki/Gum>
 - Carbohydrate containing exudates obtained from some trees or shrubs that are insoluble in alcohol and either soluble or swellable in water. Some gums, such as, agar, funori, and carrageenan, are extracts from seaweed.
 - Synonyms and related terms:
 - "gums; gomme (Fr.); goma (Esp.); gomma (It); mucilage; plant gums; natural gums "
- AMBER
 - <http://cameo.mfa.org/wiki/Amber>
 - 1) An obsolete name for any hard resin.
 - 2) True amber is a yellowish, hard, glassy, fossil resin which is most commonly found in the region of the Baltic Sea.
 - <https://en.wikipedia.org/wiki/Amber>
 - Amber is fossilized tree resin
 - FORMATION: Molecular polymerization, resulting from high pressures and temperatures produced by overlying sediment, transforms the resin first into copal. Sustained heat and pressure drives off terpenes and results in the formation of amber
 - Synonyms and related terms:
 - ambre (Fr.); ámbar (Esp.); rav (Dan., Nor.); simetita (Esp.); ambra (It.); barnsteen (Ned.); âmbar (Port.); bärnsten (Sven.); elektron (Gr.); Bernstein (Deut.); lyncurium; electrum; succinum; vernix; fornix; glassa; Bernice's Stone; berenice; resinite; retinite
- COPAL
 - <http://cameo.mfa.org/wiki/Copal>
 - A large variety of hard, natural resins obtained directly from trees such as Trachylobium species (Africa), Hymenaea courbaril (South America) and Agathis australis (New Zealand). Copals are also obtained as fossil resins from Zaire and Zanzibar. These fossil resins are very hard and almost completely insoluble. Copals are diterpenoid resins that contain communic acids, communol, resene, and volatile oil. They range in color from colorless to a bright yellow-brown.
 - Synonyms and related terms:
 - copal (Esp.); copale (It); Zanzibar; Demerara; Benguela; Sierra Leone; Mozambique; red Angola; white Angola; Congo; kauri; Manila; Pontianak;

Madagascar; Accra; Loango; Gaboon; Borneo; Singapore; South American; Cochin; Brazilian; Benin, swamp gum; anime; cowrie

- SANDARAC

- <http://cameo.mfa.org/wiki/Sandarac>
- A pale yellow natural resin from the alerce tree *Callitris quadrivalvis*
- Sandarac tears are hard and brittle with a white powdery surface due to oxidation. It forms a clear, hard film that becomes darker and redder with age. Sandarac is composed primarily of polycommunic acid (~70%) with some sandaracopimaric acid and small amounts of phenols and labdanoid compounds
- Sandarac/oil varnishes = **vernice liquida**
- Synonyms and related terms:
 - gum sandarac; sandarach; sandarac tree (*Tetraclinis articulata*); alerce tree (*Callitris quadrivalvis*); gum juniper; Berenice; Mogador; white gum; Cyprus pine; Australian pine gum (*Callitris reessii*); vernice liquida

- MASTIC (RESIN)

- http://cameo.mfa.org/wiki/Mastic_resin
- A pale, yellow natural resin produced by the evergreen mastic shrub, *Pistacia lentiscus*, which occurs in southern Europe and northern Africa. Mastic is a triterpenoid resin; some of its identified components are euphane, oleanic acid and a bicyclic diol
- Synonyms and related terms:
 - *Pistacia lentiscus*; Mastix (Deut.); resina almáciga (Esp.); lentisque (Fr.); pistachier lentisque (Fr.); resina mastice (It); mastiekboom (Ned.); mastix (Sven., Slov.); mastich; mastica; gum mastic; Chios mastic; Indian mastic; Bombay mastic; khinjak; Turkish mastic; pistacia galls; lentisk

- DAMMAR

- <http://cameo.mfa.org/wiki/Dammar>
- A clear, pale yellow natural resin derived from Dipterocarpaceae trees growing in southeast Asia. The principal trees that supply dammar resin are of the genera *Shorea*, *Balanocarpus*, or *Hopea*. Dammar is a triterpenoid resin that primarily contains dammarolic acid ($C_{54}H_{77}O_3(COOH)_2$). The soft, viscous, highly aromatic resin oozes readily from incisions in the bark and dries to become transparent, brittle, odorless lumps that are sorted into three grades: A (superior), B (small amount of impurities), and C (many impurities).
- Synonyms and related terms:
 - dammar (AAT, Esp., Fr., It.); damar (JAIC style guide); dammer; dammar gum; Malay dammar; Mata Kuching; cat's eye; Penak; gum Batu; Kalulut; Siput; Daging; Saraya; Kepong; Bata gum; Singapore dammar; Batavia dammar; Padang; Dipterocarpaceae

- SHELLAC

- <http://cameo.mfa.org/wiki/Shellac>
- A resinous substance excreted by the female of the lac insect, *Laccifer lacca*, native to India. The insects primarily deposit lac on the twigs and soft new

branches of several varieties of soapberry and acacia trees, such as the sacred fig, *Ficus religiosa*, found in India, Thailand, Myanmar (Burma), and elsewhere in southeast Asia.

- The resin coated twigs, also called sticklac, undergoes several processing steps to extract useful components. The raw lac is washed, heated and drawn out into thin sheets. Once cooled, the shellac is broken into small flakes for sale as flake shellac. The color of shellac ranges from a pale yellow to a deep red.
- Synonyms and related terms:
 - *Laccifer lacca* (also listed as *Coccus lacca*); *Ficus religiosa*; gomme laque (Fr.); Schellack (Deut.); Tafellack (Deut.); Plattlack (Deut.); goma laca (Esp.); gommalacca (It); schellack (Ned.); *Lacca in tabulis* (Deut.); lac; lacca; shell lacca; shell-lacca; gum lac; bleached shellac; lemon flakes; orange flakes; garnet lac; refined shellac; kiri; black buttonlac; buttonlac; sticklac; stick-lac; seedlac; kusmi; katki; kusmi; shellack; Diatite; Smiths Patent American Composition
- sandarac, mastic, dammar, or shellac