



A M B E R

Succinite = Baltic Amber

First Draft

24.02.06

Origin	<p>Sub-tropical forests existing 30 - 50 million years ago in the Baltic region contained various tree species (especially pines) that produced a sticky resin from their bark. This gradually dripped down the trunk, collecting in small 'pools' on the forest floor. Air bubbles were often trapped, as were numerous other items (see Inclusions section). The resin slowly dried and solidified to form a fossilised resin after covering and compaction by forest sediments. Rivers were responsible for moving some amber to the coast, from where it was distributed by sea, even reaching the beaches in eastern England. Some amber deposits lie in sediments extending out under the Baltic Sea. Pieces can become dislodged in storms and float away.</p>
Composition	<p>Organic - carbon, hydrogen, oxygen. Close to $C_{10}H_{16}O$ with hydrogen sulphide.</p>
Structure	<p>Amorphous (no distinct crystal structure). Amber is a naturally soft material (Mohs scale 2).</p>
Colour	<p>Many shades of yellow / brown. It can be transparent, translucent or opaque. 'Cognac' refers to the rich orange red, 'Golden' to golden yellow, 'Buttermilk' or 'Candy' to opaque cream amber and 'Green' to a specially prepared form. Raw amber pieces often have a reddish brown colour due to surface oxidation in the air.</p>
Inclusions	<p>Amber inclusions have provided scientists with superbly preserved evidence of forest plants and animals living millions of years ago (many of which are now extinct) which became 'trapped' in sticky resin. Specimens have been found with perfectly preserved:</p> <ul style="list-style-type: none">- insects such as flies, ants, spiders, bees (sometimes with full pollen sacks), mayflies, mosquitoes, moths, grasshoppers etc.- small animals such as frogs, lizards, bird feathers, snakeskin or footprint impressions- mosses, mushrooms and algae- pieces from higher plants such as leaves, twigs, flowers, buds, bark, cones and pollen. <p>Fake inclusions from Russia are commonplace (scorpions are a favourite!). Air bubbles are a common inclusion and during amber preparation may form the 'sun bursts/sun spangles' which look like circular shiny fish scales.</p>

Exceptional pieces may contain a water droplet trapped in an air pocket - this would be REALLY old water!!

Sources

Crystals amber is 90% from Kaliningrad (Russia) with the rest coming from Lithuania, Latvia and Poland. Crystals amber set in silver is made for us in Poland, mainly in Gdansk, Sopot and Gdynia. Silver set amber manufacture goes back many years. Ray first found our supplier Barbara during a snowstorm in 1994. Subsequently, we have slept above the amber workshop on many occasions, waking to the warm, sweet smell of amber as it is being hand crafted for us two floors below! Inlay amber is mind-bendingly difficult to produce and Ray couldn't believe how each tiny piece was individually cut. The price of inlay amber is likely to increase considerably as Polish wages become closer to the E.U. average.

Manufactured amber is a more recent innovation in Poland and has enabled Crystals to stock a cheaper range of quality jewellery. The amber tends to be calibrated, smaller sizes in contrast to the individual pieces that are hand made. However, some hand made amber jewellery uses pre-cast components which are then hand finished.

Crystals has invested an enormous amount of energy in amber and we are very much part of the amber trade in Gdansk, well known by the leading producers of amber. Sourcing amber is a fraught undertaking for our manufacturers. Environmental restrictions by local authorities in Gdansk mean that huge deposits are largely left untouched. This has resulted in the majority of amber coming from Russia. Sadly, the frontier town mentality and criminal elements make it nearly impossible to buy from Russian silver manufacturers. Much 'cheap' street/market amber jewellery comes from these sources. Crystals believes that the 92.5% marking cannot be trusted - with the real silver content being 80% or so.

Russian amber is also exported 'raw' to Poland where it is cut, cleaned and prepared for jewellery manufacture. Unfortunately, criminal elements have dominated this export trade and recently a 'clean up' by the local government has taken place. Crystals welcomes the attempts to remove criminal elements from the amber trade. An unwelcome consequence has been increased prices and reduced availability, especially of larger pieces. The main mine has suffered from heavy flooding and, more significantly, has lacked appropriate investment. It is difficult to assess the long term reliability of amber supplies and we may experience large price increases (similar to oil and gas recently). However, Gdansk is sitting on vast reserves of amber which could be exploited - resulting in a price crash. Crystals does not believe this to be imminent!

Historical Amber Historically amber has been prized for use as ornaments, jewellery, totemic objects and in various medicinal preparations. Polish museums are treasure troves of fine examples, especially in Warsaw and Gdansk.

Jurassic Park The film Jurassic Park resulted in a huge surge in amber and fossil sales for Crystals. The story line included scientists extracting dinosaur DNA from an amber inclusion mosquito that had taken a blood meal from a dinosaur. This technology *may* soon become a reality!

Wonderful disproved theories about amber's origin . . .

Sadly it has proved NOT to be:

- tears from gods and mermaids
- condensed sea foam
- solidified lynx urine!
- wax from wood ants
- modified honey
- solidified sun's rays at dusk

IMPORTANT BACKGROUND ON AMBER GOODS

NOTE - CRYSTALS REFUSES TO COMMENT ON AMBER QUALITY/SILVER CONTENT OF AMBER GOODS BOUGHT ELSEWHERE.

Crystals does NOT make any assessment/judgement/comment on any amber products not sold by us. We can, however, generally vouchsafe for all our goods and normally know the exact source of our products.

COPAL is a distinct resin from some tropical trees and not to be confused with amber, being younger and from totally different sources. It is often cheaper (and more brittle).

Ros Mason February 2006
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