



THE MATERIALS SOURCEBOOK FOR DESIGN PROFESSIONALS

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Reptile leathers come from alligator (*Alligator* genus); crocodile (*Crocodylus* genus), such as the freshwater (*C. johnstoni*), saltwater (*C. porosus*) and caiman (subfamily Caimaninae); lizards (*Varanus* genus) such as the ring lizard (*V. salvator*) and Nile monitor lizard (*V. niloticus*); and snakes including reticulated python (*Python reticulatus*), short tail python (*Python brongersmai*) and anaconda (*Eunectes notaeus*).

Their skins are tough, but are mainly used for their decorative colour, pattern and texture. This varies, but is characterized by overlapping scales, the size of which depends on the species. They are bone-like and protect the animal during its life.

Python leather has long been valued for its elegance. Each year, more than 300,000 python skins are traded. As a result of their desirability, strict rules have been established and are enforced by CITES (the Convention on International Trade in Endangered Species of Wild Fauna and Flora).

Cost depends on many factors. In the case of crocodiles, the freshwater variety from New Guinea is considered the most desirable and is thus the most expensive. Caiman is less so, because the skins are usually inferior quality with imperfections that affect dyeing. As the size of the skin increases, the cost per square metre rises. This is because as the animal grows it consumes significantly more food per body weight, and the larger it is the greater the demand from the fashion industry. For example, an animal that yields a hide suitable for a 400 mm (16 in) wide handbag takes three years to grow, which drives the price up.

Saltwater stingrays (*Dasyatis* genus) native to Southeast Asia have evolved a tough skin covered with bony plates, and tanneries have methods for softening the hard-wearing hides. Stingray is perhaps the most durable of all leathers and is widely available. Polished or sanded stingray is commonly referred to as shagreen. It is considerably more expensive, owing to the wastage that occurs as part of the process.

Shark (subclass Elasmobranchii) leather is known for its rough and coarse

texture (against the grain). Once tanned, the high oil content yields soft fabric-like leather. It is relatively heavy (thick) compared to popular exotics, such as alligator and stingray. However, its high resilience means that it will maintain its quality and appearance for many years. It is used for accessories (wallets and bags, for example), upholstery and car interiors (trim, seats and so on). There are several non-endangered and non-threatened species – the species varies according to the season and availability – available as a by-product of the fishing industry.

The skin of eels (order Anguilliformes) yields soft, stretchy leather and is also a by-product of fishing. Typically, several of the long thin hides are sewn together to make large panels suitable for bags and wallets, for example.

Ostrich (*Struthio camelus*) is the only bird commonly used to make leather. The skin of farmed chicken (*Gallus gallus domesticus*) is also available as leather, but to a much lesser extent.

Ostriches are farmed – mainly in South Africa, where around 200,000 birds are slaughtered annually – and their meat and eggs are a by-product of leather production. They yield three distinctive types of leather: body leather, which is partly (one-third to two-thirds) covered with characteristic raised bumps as a result of the large quill follicles; and shin leather. When the ostrich is around 14 months old the leather is strong enough, without being too damaged, and the birds are slaughtered.

Ostrich is one of the strongest and most flexible leathers and so is desired as much for its durability as for the distinctive markings. It is a little lighter than sheepskin, although this depends on where the leather is derived from, because the sides are softer than the back and shins. It is often mimicked with embossed cow or pig leather.

A new type of exotic leather has emerged in recent years, produced as a by-product of the fishing industry and based on the Icelandic tradition of fish skin shoes. The skin of salmon, perch (*Perca* genus), wolffish (*Anarhichas* genus) and cod (*Gadus* genus) is tanned to make decorative, patterned leather.

For its svelte and flexible qualities, fish leather is reasonably strong. The Icelandic tannery Atlantic Leather produces these leathers in a range of finishes and colours, including machine-washable salmon leather. This capacity greatly expands the potential of leather as a decorative feature in garments.

The surface of fish skin varies from coarse to smooth, depending on the species; the scales are typically removed during tanning. For example, cod has finer scales than salmon, perch is rough, and wolffish is the only one that yields smooth leather (it is a deep-sea fish free from scales). The dark spotted pattern gives wolffish a unique and distinctive appearance, something that will always be visible unless the skin is dyed black.

SUSTAINABILITY

As with fur (page 466), killing animals primarily for their skin is considered unethical by many. The exotic leather trade is carefully regulated by international government wildlife organizations, such as CITES, in addition to the government requirements of individual countries.

Many animals that yield exotic leather are endangered or threatened and so trapping in the wild is banned or controlled. Certain species are entirely banned in other countries (even if they have the correct paperwork), such as the Siamese crocodile in the USA and Malaysian snakeskin in the European Union. As a result, the vast majority of exotic leather comes from animals farmed for their skins. CITES requires that commercial farms demonstrate a viable second generation and so are not reliant on new stock from the wild.

Fish skin dress Fish skin is a by-product of the fishing industry. Converting it into leather creates a desirable product from something that would otherwise be of little value. It is often processed using

vegetable tanning and dyeing methods. This dress, created by Milan-based British eco-designer Bav Tailor, is constructed from Nile perch skin sourced from lake Victoria in Africa. Photo courtesy of Bav Tailor.

