

Conspicuous Serration of Blades - David Holthouse

Serration is a phenomenon which is common in nature and associated with patterns of dentition or individual serrations on teeth associated typically with carnivores. Hominids were also familiar with the jaw structures and serrated teeth of predators, which could be utilised to cut meat or similar substances. Serrated teeth on a jawbone could be sharpened to become a weapon or a tool, with many of these having patterns consistent with micro serrations. Serrations had a special significance for coastal people with the barbs and scales of serrated fish and shark teeth providing a wide variety of uses.

Serrations can be found in the ancient cultures of Egypt (serrated hieroglyphs and decorations) and South America (serrated and geometric lines). They were also noted in a number of the artforms in Europe (in drawings of mythical beasts). Serrated plants (the acanthus) had specific significance in Roman culture and the rose was also utilised in art and other forms.

The use of serrated weapons from the early medieval to early modern period identify a number of disadvantages over their non-serrated counterparts. As they are more complex to manufacture and maintain, these weapons appear to be largely confined to ceremonial roles. A 'sword breaker' sword was introduced as a parrying weapon during late medieval and early modern eras in Europe, providing a potential alternative to the buckler shield or other parrying daggers. The fact that they were not widespread suggests that they were largely ineffective, unlike the buckler shield, which was used over a longer period of time for combat.

Sappers or combat engineering units became popular during the Napoleonic period with swords having a single serrated edge utilised for cutting rope or sawing, although later use was mainly confined to ceremony. During World War I, the serrated blade was subject to propaganda by the British with the German 'butcher blade,' issued to pioneer units becoming controversial. Orders were allegedly released that Germans would be tortured if possessing, leading to their abolition.

I believe that the patent on serrated blades was first taken out in Syracuse, New York around 1910, with many micro-blades involved in a serration. These are particularly valuable in food preparation and often remain sharper for a longer period of time, but are more difficult to sharpen. Another serrated tool worthy of consideration is the saw, which has been developed to cut metal by changing their form and lining serrations with diamond on tungsten carbide. Mechanically driven saws with rotating serrated blades or sliding serrated blades have also been developed, as have various gardening tools for specialised cutting, including hand saws.

Many current fantasy items involve the use of serration - for example, the serrated armour of Sauron or the serrated blades found in *Demon Slayer*, *One Piece*, *Bleach* and other Anime series are greatly accentuated and appear to have special significance to the animal and spiritual worlds. With Pop culture embracing the manufacture of blades, such as fantasy swords and the tactical short sword, it is hardly surprising that serrated weapons have become entrenched in our society as symbols of power, maliciousness and indeed potentially evil.

Bio

David is currently working as a neurosurgeon and pain specialist. He has conducted research in lipid chemistry, clinical treatments and molecular biology. His interests extend to medical history, military history and medieval history. His background in Strategic therapy based on Erikson, also makes him interested in human behaviour, how things happen in history and where our ideas and biases come from. He has been reading and researching the history of serrations and their influence on society, along with the imagery and beliefs associated with serrated weapons.