

# בולקן

## Facebook | (צומת וולקן) Vulcan Junction

<https://www.facebook.com/.../Vulcan...49189190/וולקן...> Translate this page

Vulcan Junction (צומת וולקן) 52 likes. הסרט מגולל את סיפורה של קבוצת צעירים בקריות בתקופה שלפני מלחמת יום הכיפורים. במרכז הקבוצה עומדת להקת הרוק...

## Vulcan Junction (צומת וולקן) - Photos | Facebook

<https://www.facebook.com/.../Vulcan...49189190/וולקן...> Translate this page

Vulcan Junction (צומת וולקן) 52 likes. הסרט מגולל את סיפורה של קבוצת צעירים בקריות בתקופה שלפני מלחמת יום הכיפורים. במרכז הקבוצה עומדת להקת הרוק...

## וולקן (מפעל) – ויקיפדיה

[he.wikipedia.org/wiki/וולקן\\_\(מפעל\)](https://he.wikipedia.org/wiki/וולקן_(מפעל)) Translate this page Hebrew Wikipedia

וולקן הוא בית חרושת שהוקם בשנת 1934 באזור התעשייה של מפרץ חיפה, סמוך ל"צומת וולקן" שנקראה על שמו. ... 1.1 וולקן מצברים; 1.2 וולקן הנדסה; 1.3 אגף הפלסטיקה; 1.4 רפאל.

## M61 וולקן – ויקיפדיה

[he.wikipedia.org/wiki/M61\\_וולקן](https://he.wikipedia.org/wiki/M61_וולקן) Translate this page Hebrew Wikipedia

M61 וולקן, או ליתר דיוק M61A1 וולקן (אנגלית: M61 Vulcan), הוא תותח גאטלינג רב קני, לרוב שישה-קני, היורה קליעים בקוטר 20 מ"מ (לפי כללי המינוח הצבאי, מקוטר זה ומעלה ... יישומים - ביקורת - תיאור - פיתוח

## Vulcan Hotel, וולקן - השוואת מחירים - HotelsCombined

[www.hotelscombined.co.il/Hotel/Vulcan\\_Hotel.htm](http://www.hotelscombined.co.il/Hotel/Vulcan_Hotel.htm) Translate this page

Vulcan Hotel וולקן מצא את הדיל הטוב ביותר בHotelsCombined.co.il. השווה בין אלפי אתרים בחיפוש אחד. עיין ב2 מלונות נוספים באזור Vulcan Hotel וולקן (קנדה).

# فولكان

## أفرو فولكان - ويكيبيديا، الموسوعة الحرة

ar.wikipedia.org/wiki/أفرو\_فولكان Translate this page Arabic Wikipedia

أفرو فولكان (بالإنجليزية: Avro Vulcan) (رسميا هوكر سايدلي فولكان) من يوليو 1963)، هي قاذفة قنابل استراتيجية، بأجنحة دلتا، أنتجت في 1956 بالمملكة المتحدة.

## إم-61 فولكان - ويكيبيديا، الموسوعة الحرة

ar.wikipedia.org/wiki/إم-61\_فولكان Translate this page Arabic Wikipedia

إم-61 فولكان (بالإنجليزية: M61 Vulcan) هو مدفِع رشاش هيدروليكي من صنع شركة جنرال إلكتريك الأمريكية، المدفع من عيار 20 ملم وهو ذو ستة سيطات، دخل الخدمة في عام ...

## كوزاكي فولكان كاستم اصدار خاص - kawasaki vulcan ... - حراج

haraj.com.sa/...\_كوزاكي\_فولكان\_كاستم\_اصدار\_خاص/... Translate this page

كوزاكي فولكان كاستم اصدار خاص kawasaki vulcan custom special edition , السلام عليكم اعرض عليكم نبأبي مثل ما هو واضح في الاعلان نوع كوزاكي فولكان كاستم موديل ...

## Mohamed El Susy - سخان فولكان بالانابيب المفرغة Vulcan ...

https://www.facebook.com/edar.../218397131687527 Translate this page

سخان فولكان بالانابيب المفرغة Vulcan Heat- Pipe Solar Heater من شركة ( طاقة مصر ) هو سخان مياه يعمل بالطاقة الشمسية ولا يحتاج الى اى مصدر آخر للطاقة...

# وولگان

## ولكان صنعت سپاهان < معرفی شرکت

vulcansanat.com/معرفی-شرکت/ Translate this page

شرکت ولکان صنعت سپاهان با بیش از دو دهه تلاش مستمر در زمینه طراحی و تولید انواع قطعات لاستیکی مورد استفاده در معادن و صنایع کانی، نساجی، چاپ، فولاد سازی ...

## لاستیک سیلندر ولکان VULCAN صفحه 1 - نور تک

www.noortec.com/.../VULCAN-سیلندر-ولکان/.../vie... Translate this page

سٹیک ولکان. مواد مصرفی ولکان و از همه مهم تر لاستیک سیلندر ولکان، از شناخته شده ترین مواد مصرفی و مورد اعتماد متخصصین صنعت چاپ ایران و جهان است.

## اچ ام اس ولکان (۱۸۸۹) - ویکی پدیا، دانشنامه آزاد

fa.wikipedia.org/.../۱)\_اچ\_ام\_اس\_ولکان/... Translate this page Persian Wikipedia

ام اس ولکان (۱۸۸۹) (به انگلیسی: HMS Vulcan (1889)) یک کشتی است که طول آن ۳۵۰ فوت (۱۱۰ متر) می باشد. این کشتی در سال ۱۸۸۹ ساخته شد.

## یواس اس ولکان (۱۸۸۴) - ویکی پدیا، دانشنامه آزاد

fa.wikipedia.org/.../\_یواس\_اس\_ولکان/... Translate this page Persian Wikipedia

یواس اس ولکان (۱۸۸۴) (به انگلیسی: USS Vulcan (1884)) یک کشتی بود که طول آن ۲۶۵ فوت ۴ اینچ (۸۰٫۸۷ متر) بود. این کشتی در سال ۱۸۸۴ ساخته شد.

# Vulcan (mythology)

In ancient Roman religion and myth, **Vulcan** (Latin: *Volcānus* or *Vulcānus*; pronounced [wɔl.'ka:.nus], [wul.'ka:.nus]) is the god of fire<sup>[1]</sup> including the fire of volcanoes, also god of metalworking and the forge. Vulcan is often depicted with a blacksmith's hammer.<sup>[2]</sup> The **Vulcanalia** was the annual festival held August 23 in his honor. His Greek counterpart is Hephaestus, the god of fire and smithery. In Etruscan religion, he is identified with Sethlans.

Vulcan belongs to the most ancient stage of Roman religion: Varro, the ancient Roman scholar and writer, citing the *Annales Maximi*, recalls that king Titus Tatius dedicated altars to a series of deities among which Vulcan is mentioned.<sup>[3]</sup>

## 1 Etymology

The origin of the name pangerit is unclear and debated. Roman tradition maintained that it was related to Latin words connected to lightning (*fulgur*, *fulgere*, *fulmen*), which in turn was thought of as related to flames.<sup>[4]</sup> This interpretation is supported by Walter William Skeat in his etymological dictionary as meaning *lustre*.<sup>[5]</sup>

It has been supposed that his name was not Latin but related to that of the Cretan god *Velchanos*, a god of nature and the nether world.<sup>[6]</sup> Wolfgang Meid has refused this identification as *phantastic*.<sup>[7]</sup> More recently this etymology has been taken up by Gérard Capdeville who finds a continuity between Cretan Minoan god *Velchanos* and Etruscan *Velchans*. The Minoan god's identity would be that of a young deity, master of fire and companion of the Great Goddess.<sup>[8]</sup>

Christian Guyonvarc'h has proposed the identification with the Irish name *Olcan* (Ogamic *Ulccagni*, in the genitive). Vasily Abaev compares it with the Ossetic *Wærgon*, a variant of the name of *Kurdalægon*, the smith of the Nart saga. Since the name in its normal form *Kurdalægon* is stable and has a clear meaning (*kurd* smith+ *on* of the family+ *Alaeg* name of one of the Nartic families), this hypothesis has been considered unacceptable by Dumezil.<sup>[9]</sup>

## 2 Worship

Vulcan's oldest shrine in Rome, called the Vulcanal, was situated at the foot of the Capitoline in the Forum Ro-

manum, and was reputed to date to the archaic period of the kings of Rome,<sup>[10][11]</sup> and to have been established on the site by Titus Tatius,<sup>[12]</sup> the Sabine co-king, with a traditional date in the 8th century BC. It was the view of the Etruscan haruspices that a temple of Vulcan should be located outside the city,<sup>[13]</sup> and the Vulcanal may originally have been on or outside the city limits before they expanded to include the Capitoline Hill.<sup>[1]</sup> The Vulcanalia sacrifice was offered here to Vulcan, on August 23.<sup>[10]</sup> Vulcan also had a temple on the Campus Martius, which was in existence by 214 BC.<sup>[1][14]</sup>

The Romans identified Vulcan with the Greek smith-god Hephaestus.<sup>[15]</sup> Hephaestus became associated like his Greek counterpart with the constructive use of fire in metalworking. A fragment of a Greek pot showing Hephaestus found at the Vulcanal has been dated to the 6th century BC, suggesting that the two gods were already associated at this date.<sup>[11]</sup> However, Vulcan had a stronger association than Hephaestus with fire's destructive capacity, and a major concern of his worshippers was to encourage the god to avert harmful fires.

## 3 Vulcanalia

The festival of Vulcan, the Vulcanalia, was celebrated on August 23 each year, when the summer heat placed crops and granaries most at risk of burning.<sup>[1][16]</sup> During the festival bonfires were created in honour of the god, into which live fish or small animals were thrown as a sacrifice, to be consumed in the place of humans.<sup>[17]</sup>

The Vulcanalia were part of the cycle of the four festivities of the second half of August (Consualia on August 21, Vulcanalia on 23, Opiconsivia on 25 and Volturnalia on 27) related to the agrarian activities of that month and in symmetric correlation with those of the second half of July (Lucaria on July 19 and 21, Neptunalia on 23 and Furrinalia on 25). While the festivals of July dealt with untamed nature (woods) and waters (superficial waters the Neptunalia and underground waters the Furrinalia) at a time of danger caused by their relative deficiency, those of August were devoted to the results of human endeavour on nature with the storing of harvested grain (Consualia) and their relationship to human society and regality (Opiconsivia) which at that time were at risk and required protection from the dangers of the excessive strength of the two elements of fire (Vulcanalia) and wind (Volturnalia) reinforced by dryness.<sup>[18]</sup>

It is recorded that during the *Vulcanalia* people used to hang their cloths and fabrics under the sun.<sup>[19]</sup> This habit might reflect a theological connection between Vulcan and the divinized Sun.<sup>[20]</sup>

Another custom observed on this day required that one should start working by the light of a candle, probably to propitiate a beneficial use of fire by the god.<sup>[21]</sup> In addition to the *Vulcanalia* of August 23, the date of May 23, which was the second of the two annual *Tubilustria* or ceremonies for the purification of trumpets, was sacred to Vulcan.<sup>[16][22]</sup>

The *Ludi Vulcanalici*, was held just once on August 23, 20 BC, within the temple precinct of Vulcan, and used by Augustus to mark the treaty with Parthia and the return of the legionary standards that had been lost at the Battle of Carrhae in 53 BC.

A flamen, one of the *flamines minores*, named *flamen Vulcanalis* was in charge of the cult of the god. The flamen Vulcanalis officiated at a sacrifice to the goddess Maia, held every year at the *Kalendae* of May.<sup>[23]</sup>

Vulcan was among the gods placated after the Great Fire of Rome in AD 64.<sup>[24]</sup> In response to the same fire, Domitian (emperor 81–96) established a new altar to Vulcan on the Quirinal Hill. At the same time a red bull-calf and red boar were added to the sacrifices made on the *Vulcanalia*, at least in that region of the city.<sup>[25]</sup>



Andrea Mantegna: *Parnas, Vulcan, god of fire*

## 4 Theology

The nature of the god is connected with religious ideas concerning fire.

The Roman concept of the god seems to associate him to both the destructive and the fertilizing powers of fire.

In the first aspect he is worshipped in the *Volcanalia* to avert its potential danger to harvested wheat. His cult is located outside the boundaries of the original city to avoid the risk of fires caused by the god in the city itself.<sup>[26]</sup>

This power is, however, considered useful if directed against enemies and such a choice for the location of the god's cult could be interpreted in this way too. The same idea underlies the dedication of the arms of the defeated enemies,<sup>[27]</sup> as well as those of the surviving general in a devotion ritual to the god.<sup>[28]</sup>

Through comparative interpretation this aspect has been connected by Dumézil to the third or defensive fire in the theory of the three Vedic sacrificial fires.<sup>[29]</sup> In such theory three fires are necessary to the discharge of a religious ceremony: the hearth of the landlord, which has the function of establishing a referential on Earth in that precise location connecting it with Heaven; the sacrificial fire, which conveys the offer to Heaven; and the defensive fire, which is usually located on the southern boundary of the sacred space and has a protective function against evil influences. Since the territory of the city of Rome was seen as a magnified temple in itself, the three fires should be identified as the hearth of the landlord in the temple of Vesta (*aedes Vestae*); the sacrificial fires of each temple, shrine or altar; and the defensive fire in the temple of Vulcan.

Another meaning of Vulcan is related to male fertilizing power. In various Latin and Roman legends he is the father of famous characters, such as the founder of Praeneste Caeculus,<sup>[30]</sup> Cacus,<sup>[31]</sup> a primordial being or king, later transformed into a monster that inhabited the site of the Aventine in Rome, and Roman king Servius Tullius. In a variant of the story of the birth of Romulus the details are identical even though Vulcan is not explicitly mentioned.<sup>[32]</sup>

Some scholars think that he might be the unknown god who impregnated goddesses *Fortuna Primigenia* at Praeneste and *Feronia* at Anxur. In this case he would be the father of Jupiter.<sup>[33]</sup> This view is though in conflict with that which links the goddess to Jupiter, as his daughter (*puer Jovis*) and his mother too, as *primigenia*, meaning "primordial".

In all of the above-mentioned stories the god's fertilizing power is related to that of the fire of the house hearth.

In the case of Caeculus, his mother was impregnated by a spark that dropped on her womb from the hearth while she was sitting nearby.<sup>[34]</sup> Servius Tullius's mother Ocesia was impregnated by a male sex organ that mirac-



ulously appeared in the ashes of the sacrificial ara, at the order of Tanaquil, Tarquinius Priscus's wife.<sup>[35]</sup> Pliny the Elder tells the same story, but states that the father was the *Lar familiaris*.<sup>[36]</sup> The divinity of the child was recognized when his head was surrounded by flames and he remained unharmed.<sup>[37]</sup>

Through the comparative analysis of these myths archaeologist Andrea Carandini opines that *Cacus* and *Caca* were the sons of Vulcan and of a local divine being or a virgin as in the case of *Caeculus*. *Cacus* and *Caca* would represent the metallurgic and the domestic fire, projections of Vulcan and of *Vesta*.

These legends date back to the time of preurban Latium. Their meaning is quite clear: at the divine level Vulcan impregnates a virgin goddess and generates Jupiter, the king of the gods; at the human level he impregnates a local virgin (perhaps of royal descent) and generates a king.<sup>[38]</sup>

The first mention of a ritual connection between Vulcan and *Vesta* is the lectisternium of 217 BC. Other facts that seem to hint at this connection are the relative proximity of the two sanctuaries and *Dionysius of Halicarnassus's* testimony that both cults had been introduced to Rome by *Titus Tatius* to comply with a vow he had made in battle.<sup>[39]</sup> *Varro* confirms the fact.<sup>[40]</sup>

Vulcan is related to two equally ancient female goddesses *Stata Mater*,<sup>[41]</sup> perhaps the goddess who stops fires and *Maia*.<sup>[42]</sup>

*Herbert Jennings Rose* interprets *Maia* as a goddess related to growth by connecting her name with IE root \*MAG.<sup>[43]</sup> *Macrobius* relates *Cincius's* opinion that Vulcan's female companion is *Maia*. *Cincius* justifies his view on the grounds that the *flamen Volcanalis* sacrificed to her at the *Kalendae* of May. In *Piso's* view the companion of the god is *Maiestas*.<sup>[44]</sup>

According to *Gellius* as well, *Maia* was associated with Vulcan; and he backs up his view by quoting the ritual prayers in use by Roman priests.<sup>[45]</sup>

[46]

The god is the patron of trades related to ovens (cooks, bakers, confectioners) as attested in the works of *Plautus*,<sup>[47]</sup> *Apuleius* (the god is the cook at the wedding of *Amor* and *Psyche*)<sup>[48]</sup> and in *Vespa's* short poem in the *Anthologia Latina* about the litigation between a cook and a baker.<sup>[49]</sup>

## 5 Sons of Vulcan

According to *Hyginus' Fabulae*, the sons of Vulcan are *Philammon*, *Cecrops*, *Erichthonius*, *Corynetes*, *Cercyon*, *Philottus* and *Spinther*.<sup>[50]</sup>

## 6 Hypothesis on the origins of Vulcan

The origin of the Roman god of fire Vulcan has been traced back to the Cretan god *Velchanos* by *Gérard Capdeville*, primarily under the suggestion of the close similarity of their names.<sup>[51]</sup> Cretan *Velchanos* is a young god of Mediterranean or Near Eastern origin who has mastership of fire and is the companion of the Great Goddess. These traits are preserved in Latium only in his sons *Cacus*, *Caeculus*, *Romulus* and *Servius Tullius*. At Praeneste the uncles of *Caeculus* are known as *Digiti*,<sup>[52]</sup> noun that connects them to the Cretan *Dactyli*.

His theology would be reflected in the Greek myths of *Theseus* and the *Minotaur* and in those concerning the childhood of *Zeus* on Mount *Ida*. The Mediterranean Pregreek conception is apparent in the depiction of *Velchanos* as a young man sitting upon a fork of a tree on coins from *Phaistos* dating from 322 to 300 BC, showing him as a god of vegetation and springtime: the tree is the symbol of the union of Heaven and Earth and their generative power, i. e. the site of the union of the god and the goddess. Otherwise Earth would be symbolised in the tree and Heaven in the double axe of the god. Later *Velchanos* was depicted as a bull as testified in the myths of *Pasiphae* and *Europa*. The Greeks misunderstood the meaning of the bull as for them the symbol of *Zeus* was a bird: the cock, the cuckoo or the eagle. *Theseus* brought to *Delos* the dance named *géranos* (literally the dance of the crane) which *Capdeville* connects with *Garanos*, a variant of the *Recaranus* of Italic myths. *B. Sergent* remarks that such an inquiry needs to include the *Tarvos Trigaranos* (the bull of the three horns) of Gaul.

In Crete *Velchanos* was the god of initiatory practices of youngsters.<sup>[53]</sup>

Another reflection of the tradition of the Cretan *Velchanos-Zeus* would be found in *Argolid* in the mysteries of *Zeus Lykaios*, which contemplated anthropophagy and may have inspired the Italic *Lupercalia*.

The theological profile of *Velchanos* looks identical to that of *Jupiter Dolichenus*, a god of primarily Hittite ascendance in his identification with the bull, who has Sumero-Accadic, Aramaic and Hittite-Hurrite features as a god of tempest, according for example to the researches conducted in Syria by French scholar *Paul Merlat*. His cult enjoyed a period of popularity in the Roman Empire during the 2nd and 3rd centuries and the god had a temple in Rome on the *Aventine*.<sup>[54]</sup>

## 7 Vulcan and the foundation of Rome

Vulcan was the supreme god of early Cretan religion, where the festival of the *βελχάνια* as well as a month

Γ(digamma)ελχάνιος are attested: a gloss by Hesychius states that “Velchanos is Zeus among the Cretan”.<sup>[55]</sup> He was the first god of the cavern of **Mount Ida**, where he had an oracle, and was honoured also in Cyprus.

His name is very similar to that of Latin god Volcanus, who himself was considered to be the father of **Caeculus** and **Servius Tullius**, not to mention **Romulus** in the version transmitted by Promathion, which is very similar to the legend of **Servius**.

The founder of Rome has a close relationship with this god as he founded the *Volcanal* and there he dedicated a quadriga with his own statue after his first victory. It is there too that a part of the tradition locates the place of his death: the site was marked by the **Lapis Niger**: Festus writes “Niger lapis in Comitio locum funestum significat, ut ali, Romuli morti destinatum...”. On the day of the **Volcanalia** (August 23) a sacrifice was offered to **Hora Quirini**, paredra of **Quirinus** with whom the deified **Romulus** was identified. As the **Consualia** were mentioned first in connection with the founding of Rome in the episode of the abduction of the Sabine women, as the **Volcanalia** are celebrated two days later and two days before the *Opiconsivia*, and as the name **Volcanus** resembles that of the ancient Cretan god honoured in the Βελχῆνιᾶ who presided over initiation rites, the **Consualia** must have a meaning of integration into the citizenship. This provides an explanation for the choice of the festival of the *Parilia* as the date of the foundation of Rome, since these are first of all the festival of the *iuniores*. Festus writes: “Parilibus Romulus Urbem condidit, quem diem festum praecipue habebant iuniores.” The date of April 21 marked the starting point of the process of initiation of the future new citizens which concluded four months later on the ceremony of the **Consualia**, which involves athletic games and marriages.<sup>[56]</sup>

## 8 Greek myths of Hephaestus

Through his identification with the **Hephaestus** of Greek mythology, **Vulcan** came to be considered as the manufacturer of art, arms, iron, jewelry, and armor for various gods and heroes, including the thunderbolts of **Jupiter**. He was the son of **Jupiter** and **Juno**, and the husband of **Maia** and **Venus**. His smithy was believed to be situated underneath **Mount Etna** in **Sicily**.

As the son of **Jupiter**, the king of the gods, and **Juno**, the queen of the gods, **Vulcan** should have been quite handsome, but baby **Vulcan** was small and ugly with a red, bawling face. **Juno** was so horrified that she hurled the tiny baby off the top of **Mount Olympus**.

**Vulcan** fell down for a day and a night, landing in the sea. Unfortunately, one of his legs broke as he hit the water, and never developed properly. **Vulcan** sank like a pebble to the cool blue depths where the sea-nymph, **Thetis**, found him and took him to her underwater grotto,

and raised him as her own son.

**Vulcan** had a happy childhood with dolphins as his playmates and pearls as his toys. Late in his childhood, he found the remains of a fisherman’s fire on the beach and became fascinated with an unextinguished coal, still red-hot and glowing.

**Vulcan** carefully shut this precious coal in a clamshell, took it back to his underwater grotto, and made a fire with it. On the first day after that, **Vulcan** stared at this fire for hours on end. On the second day, he discovered that when he made the fire hotter with bellows, certain stones sweated iron, silver or gold. On the third day he beat the cooled metal into shapes: bracelets, chains, swords and shields. **Vulcan** made pearl-handled knives and spoons for his foster mother, and for himself he made a silver chariot with bridles so that seahorses could transport him quickly. He even made slave-girls of gold to wait on him and do his bidding.

Later, **Thetis** left her underwater grotto to attend a dinner party on **Mount Olympus** wearing a beautiful necklace of silver and sapphires that **Vulcan** had made for her. **Juno** admired the necklace and asked where she could get one. **Thetis** became flustered, causing **Juno** to become suspicious; and, at last, the queen god discovered the truth: the baby she had once rejected had grown into a talented blacksmith.



The Forge of Vulcan by *Diego Velázquez*, (1630).

**Juno** was furious and demanded that **Vulcan** return home, a demand that he refused. However he did send **Juno** a beautifully constructed chair made of silver and gold, inlaid with mother-of-pearl. **Juno** was delighted with this gift but, as soon as she sat in it her weight triggered hidden springs and metal bands sprung forth to hold her fast. The more she shrieked and struggled the more firmly the mechanical throne gripped her; the chair was a cleverly designed trap.<sup>[57]</sup>

For three days **Juno** sat fuming, still trapped in **Vulcan**’s chair; she could not sleep, she could not stretch, she could not eat. It was **Jupiter** who finally saved the day: he promised that if **Vulcan** released **Juno** he would give him

a wife, **Venus** the goddess of love and beauty. Vulcan agreed and married Venus. He later built a smithy under **Mount Etna** on the island of **Sicily**. It was said that whenever Venus is unfaithful, Vulcan grows angry and beats the red-hot metal with such a force that sparks and smoke rise up from the top of the mountain, to create a volcanic eruption.

According to **Virgil**, Vulcan was the father of **Caeculus**.<sup>[58]</sup>

To punish mankind for stealing the secrets of fire, Jupiter ordered the other gods to make a poisoned gift for man. Vulcan's contribution to the beautiful and foolish **Pandora** was to mould her from clay and to give her form. He also made the thrones for the other gods on **Mount Olympus**.

## 9 Sanctuaries

The main and most ancient sanctuary of Vulcan in Rome was the *Volcanal*, located in the *area Volcani*, an open-air space at the foot of the **Capitolium**, in the northwestern corner of the **Roman Forum**, with an area dedicated to the god and a perennial fire. It was one of the most ancient Roman shrines.<sup>[59]</sup> According to Roman tradition the sanctuary had been dedicated by **Romulus**. He had placed on the site a bronze *quadriga* dedicated to the god, a war trophy from the **Fidenates**. According to **Plutarch**, though, the war in question was that against **Cameria**, that occurred sixteen years after the foundation of Rome.<sup>[60]</sup> There **Romulus** would have also dedicated to Vulcan a statue of himself and an inscription in Greek characters listing his successes.<sup>[61]</sup> **Plutarch** states that **Romulus** was represented crowned by **Victory**.<sup>[60]</sup> Moreover he would have planted a sacred lotus tree<sup>[62]</sup> in the sanctuary that was still living at the time of **Pliny the Elder** and was said to be as old as the city.<sup>[63]</sup> The hypothesis has been presented that the *Volcanal* was founded when the Forum was still outside the town walls.<sup>[64]</sup>

The *Volcanal* was perhaps used as a cremation site as suggested by the early use of the Forum as a burial site.<sup>[65]</sup> **Livy** mentions it twice, in 189 and 181 BC, for the prodigies of a rain of blood.<sup>[66]</sup>

The *area Volcani* was probably a *locus substructus*. It was five meters higher than the **Comitium**<sup>[67]</sup> and from it the kings and the magistrates of the beginnings of the republic addressed the people, before the building of the *rostra*.<sup>[68]</sup>

On the *Volcanal* there was also a statue of **Horatius Cocles**<sup>[69]</sup> that had been moved here from the **Comitium**, *locus inferior*, after it had been struck by lightning. **Aulus Gellius** writes that some *haruspices* were summoned to expiate the prodigy and they had it moved to a lower site, where sunlight never reached, out of their hatred for the Romans. The fraud was revealed, however, and the *haruspices* were executed. Later it was found that the statue should be placed on a higher site, thus it was placed

in the *area Volcani*.<sup>[70]</sup>

In 304 BC a *sacellum* to **Concordia** was built in the *area Volcani*: it was dedicated by *aedilis curulis* **Cnaeus Flavius**.<sup>[71]</sup>

According to **Samuel Ball Platner**, in the course of time the *Volcanal* would have been more and more encroached upon by the surrounding buildings until it was totally covered over. Nonetheless the cult was still alive in the first half of the imperial era, as is testified by the finding of a *dedica* of **Augustus's** dating from 9 BC.<sup>[72]</sup>

At the beginning of the 20th century, behind the **Arch of Septimius Severus** were found some ancient tufaceous foundations that probably belonged to the *Volcanal* and traces of a rocky platform, 3.95 meters long and 2.80 meters wide, that had been covered with concrete and painted in red. Into its upper surface are dug several narrow channels and in front of it are the remains of a draining channel made of tufaceous slabs. The hypothesis has been suggested that this was Vulcan's *area* itself. The rock shows signs of damages and repairs. On the surface there are some hollows, either round or square, that bear resemblance to graves and were interpreted as such in the past,<sup>[73]</sup> particularly by **Von Duhn**. After the discovery of cremation tombs in the Forum the latter scholar maintained that the *Volcanal* was originally the site where corpses were cremated.<sup>[74]</sup>

Another temple was erected to the god before 215 BC in the **Campus Martius**, near the **Circus Flaminius**, where games in his honour were held during the festival of the *Volcanalia*.<sup>[64]</sup>

## 10 Vulcan outside Rome

At **Ostia** the cult of the god, as well as his *sacerdos*, was the most important of the town. The *sacerdos* was named *pontifex Vulcani et aedium sacrarum*: he had under his jurisdiction all the sacred buildings in town and could give or withhold the authorisation to erect new statues to Eastern divinities. He was chosen for life, perhaps by the council of the *decuriones*, and his position was the equivalent of the *pontifex maximus* in Rome. It was the highest administrative position in the town of **Ostia**.

He was selected from among people who had already held public office in **Ostia** or in the imperial administration. The *pontifex* was the sole authority who had a number of subordinate officials to help discharge his duties, namely three *praetores* and two or three *aediles*. These were religious offices, different from civil offices of similar name.<sup>[75]</sup>

On the grounds of a fragmentary inscription found at **Annaba** (ancient **Hippo Regius**), it is considered possible that the writer **Suetonius** had held this office.<sup>[76]</sup>

From **Strabon**<sup>[77]</sup> we know that at **Pozzuoli** there was an area called in Greek *agora* of **Hephaistos** (Lat. Forum

Vulcani). The place is a plain where many sulphurous vapour outlets are located (currently *Solfatara*).

Pliny the Elder records that near **Modena** fire came out from soil *statis Vulcano diebus*, on fixed days devoted to Vulcan.<sup>[78]</sup>

## 11 Legacy

Vulcan is the patron god of the English steel-making city of **Sheffield**. His statue sits on top of **Sheffield Town Hall**.

A **Vulcan Statue** located in **Birmingham, Alabama** is the largest cast iron statue in the world.<sup>[79]</sup>

The word *volcano* is derived from the name of **Vulcano**, a volcanic island in the Aeolian Islands of Italy whose name in turn originates from Vulcan.

A 12 foot tall and 1200 pound **Vulcan statue** at **California University of Pennsylvania (CAL U)** serves as the school's mascot. Photograph of the CAL U statue of Vulcan: <http://www.flickr.com/photos/greg-buretz/5940097720/>

In 2013, Reuters reported that name "Vulcan" was being promoted as a name for "newly discovered" moons of **Pluto**<sup>[80]</sup> The moons had been discovered in 2011 and 2012, bringing the count of known moons of Pluto to five. Though the name *Vulcan* won a popular vote, the **International Astronomical Union** decided in June 2013 to finalize the names as **Charon, Styx, Nix, Kerberos, and Hydra (moon)**.<sup>[81]</sup>

Vulcan is a playable character in **Smite**, an online MOBA where Gods fight each other.

## 12 See also

- **Vulcan of the alchemists**
- **Vulcan Iron Works**

## 13 References

- [1] Georges Dumézil (1996) [1966]. *Archaic Roman Religion: Volume One*. trans. Philip Krapp. Baltimore: Johns Hopkins University Press. pp. 320–321. ISBN 0-8018-5482-2.
- [2] Corbishley, Mike "Ancient Rome" Warwick Press 1986 Toronto.
- [3] Varro *De Lingua Latina* V, X: "...Et arae Sabinum linguam olent, quae Tati regis voto sunt Romae dedicatae: nam, ut annales dicunt, vovit Opi, Florae, Vediovi Saturnoque, Soli, Lunae, Vulcano et Summano, itemque Larundae, Termino, Quirino, Vortumno, Laribus, Dianae Lucinaeque...".
- [4] Varro *Lingua Latina* V, 10: "Ignis a gnascendo, quod huic nascitur et omne quod nascitur ignis succendit; ideo calet ut qui denascitur cum amittit ac frigescit. Ab ignis iam maiore vi ac violentia Volcanus dictus. Ab eo quod ignis propter splendorem fulget, fulgur et fulmen, et fulguritum quod fulmine ictum."
- [5] W. W. Skeat *Etymological Dictionary of the English Language* New York 1963 (first published in 1882) s.v. *volcano*: "cf. Sanskrit varchar-s: lustre".
- [6] Arthur B. Cook *Zeus: a study in Ancient religion* 1925 Vol. II, pp. 945 ff.
- [7] W. Meid "Etrusc. Velkhans- Lat. Volcanus" *Indogermanische Forschungen*, 66 1961.
- [8] Gérard Capdeville *Volchanus. Recherches comparatistes sur le culte de Vulcain* Rome 1994.
- [9] G. Dumézil *La religion romaine archaïque* Paris, 1974, part II, chap. 2. It. tr. Milano 1977 p. 284 n. 12.
- [10] Samuel Ball Platner; Thomas Ashby (1929). "Volcanal". *A Topographical Dictionary of Ancient Rome*. London: Oxford University Press. pp. 583–584. Retrieved 2007-07-28.
- [11] Beard, Mary; John North and Simon Price (1998). *Religions of Rome Volume 2: A Sourcebook*. Cambridge: Cambridge University Press. pp. no. 1.7c. ISBN 0-521-45015-2.
- [12] Dionysius of Halicarnassus, II.50.3; Varro V.74.
- [13] Vitruvius 1.7; see also Plutarch, *Roman Questions* 47.
- [14] Livy, *Ab urbe condita* 24.10.9.
- [15] *Larousse Desk Reference Encyclopedia*, The Book People, Haydock, 1995, p. 215.
- [16] W. Warde Fowler (1899). *The Roman Festivals of the Period of the Republic: An Introduction to the Study of the Religion of the Romans*. London: Macmillan and Co. pp. 123–124, 209–211. ISBN 0-548-15022-2. Retrieved 2007-07-28.
- [17] Sextus Pompeius Festus, *On the Meaning of Words*, s.v. "piscatorii ludi"; Varro, *On the Latin Language* 6.3.
- [18] In Dumézil's interpretation the Volturialia were associated with the protection of riping grapes from a hot and dry southwestern wind named Volturnus, not with the river Tiber, as Mommsen had supposed, or Volturnus of Campania.
- [19] Paulinus of Nola *Letters* XXXII, 139.
- [20] G. Dumézil *Fetes romaines d'été et d'automne* Paris Gallimard 1975; It. transl. *Feste Romane* Genova II Melangolo 1979 pp. 60 ff.
- [21] Pliny the Younger *Letters* III, 5.
- [22] Ovid, *Fasti* 5.725–726.
- [23] Macrobius *Saturnalia* I 12,18; Aulus Gellius *Noctes Atticae* XIII 23, 2.



- [24] Tacitus, *Annals* 15.44.1.
- [25] *Inscriptiones Latinae Selectae* 4914, translated by Robert K. Sheark. (1988). *The Roman Empire: Augustus to Hadrian*. Translated Documents of Greece and Rome. Cambridge: Cambridge University Press. pp. no. 99. ISBN 0-521-33887-5.
- [26] Plutarch *Questiones Romanae* 47; Vitruvius *De architectura* I,7,1
- [27] Servius *Ad Aeneidem* VIII 562.
- [28] Livy *Ab Urbe Condita Libri* VIII 10.
- [29] G. Dumézil *La religion romaine archaïque* Paris, 1974, part 2, chap. 2; It. tr. Milan 1977 pp. 277-280.
- [30] Cato Censor *Origines* fragment 65, cited in *Scholia Veronensia ad Aeneidem* VII 681 p. 438, 16 ff. Hagen.
- [31] Vergil *Aeneis* VIII 198.
- [32] Plutarch *Romulus* II 3-6
- [33] Jacqueline Champeaux *Fortuna, I, Fortuna dans la religion romaine archaïque* Rome, 1982; A. Mastrocinque *Romolo. La fondazione di Roma tra storia e leggenda* Este, 1993.
- [34] Vergil *Aeneis* VII 680.
- [35] Ovid *Fasti* VI 627.
- [36] Pliny the Elder *Naturalis Historia* XXXVI 204.
- [37] Ovid *Fasti* VI 625-636.
- [38] Andrea Carandini *La nascita di Roma* Turin, 1997, p. 52.
- [39] Dionysius Halicarnasseus *Antiquitates Romanae* II 50, 3.
- [40] Varro *Lingua Latina* V 73: see above.
- [41] CIL VI, 00802, found in Rome.
- [42] Aulus Gellius *Noctes Atticae* XII 23, 2: “Maia Volcani”.
- [43] H. J. Rose *A dictionary of classical antiquities* It. transl., Turin, 1995.
- [44] Macrobius *Saturnalia* I 12, 18.
- [45] A. Gell. *Noct. Att.* XIII, 23, 2
- [46] Maiestas and Maia, though, are possibly the same divine person: compare Ovid’s explanations of the meaning of the name of the month May in his *Fasti*: V 1-52 Maiestas; 81-106 Maia both as possible eponyms of May.
- [47] Plautus *Aulularia* 359.
- [48] Apuleius *Metamorphoses* VI 24, 2.
- [49] *Iudicium coci et pistoris iudice Vulcano*.
- [50] Hyginus *Fabulae* 158.
- [51] G. Capdeville *Volcanus. Recherches comparatistes sur le cult de Vulcain* Rome 1994. Reviewed by Bernard Sergent in *Revue de l’histoire des religions* 216 1999 4 p. 475-481; Vinciane Pirenne-Delforge in *Kernos* 1996 9 p. 434-436.
- [52] Solinus II 9; Arnobius *Adversus Nationes* III 41, 1; 43, 3.
- [53] G. Capdeville “Jeux athlétiques et rituels de fondation” *Publications de L’École Française de Rome* 1993 p. 141-187.
- [54] Paul Merlat *Jupiter Dolichenus, Essai d’interprétation et de synthèse* Paris PUF 1960 reviewed by Alfred Merlin “Jupiter Dolichenus” in *Journal des savants* 1960 4 p. 160-166.
- [55] Hesychius Γ 315 Latte.
- [56] G. Capdeville “Jeux athlétiques et rituels de fondation” *Publications de l’École Française de Rome* 1993 p. 182-186.
- [57] William Godwin (1876). “Lives of the Necromancers”. p. 37.
- [58] Virgil, *Aeneid* 7.678–681; Servius on *Aeneid* 7.678.
- [59] Cf. above note 10, 11 and 12.
- [60] Plutarch *Romulus* 24.
- [61] Dionysius of Halicarnassus *Roman Antiquities* II 54, 2.
- [62] The Italic lotus, *diospyrus lotus*, or *melilotus*, Columella *De Re Rustica* VII 9; Galen.
- [63] Pliny the Elder *Naturalis Historia* XVI 236.
- [64] G. Dumézil *La religione romana arcaica* Milano Rizzoli 1977 p. 285.
- [65] Von Duhn *Altitalische Gräberkunde* as cited by Samuel Ball Platner & Thomas Ashby *A Topographical Dictionary of Ancient Rome* London 1928 p. 583-4.
- [66] Livy *Ab Urbe Condita Libri* XL 19, 2.
- [67] Dionysius of Halicarnassus *Antiquitates Romanae* II 50, 2.
- [68] Dionysius of Halicarnassus *Antiquitates Romanae* XI 39, 1.
- [69] Plutarch *Publicola*, 16
- [70] Aulus Gellius *Noct. Att.* IV, 5; Gellius writes that the episode was recorded in the XI book of the *Annales Maximii* and by Verrius Flaccus *Memorabilia* I.
- [71] Livy *Ab Urbe Condita Libri* IX 46.
- [72] CIL VI 457.
- [73] Richter *BRT* iv 15-16.
- [74] Von Duhn *Italische Gräberkunde* i. 413 sqq.
- [75] C. Pavolini *La vita quotidiana a Ostia* Roma-Bari, 1986
- [76] *AE* 1953, 00073; G. Gaggero Introduction to Suetonius’s *Life of the twelve Caesars* Milan 1994
- [77] Strabone *Geografia. L’Italia* V,4,6, Milan 1988
- [78] Pliny the Elder *Nat. Hist.* II, 240
- [79] “History of Vulcan Park”. *Vulcan Park*. Archived from the original on 2008-02-15. Retrieved 2008-02-24.

- [80] Gray, Kevin (20 February 2013). "Vulcan has big lead in bid to name Pluto's newly discovered moons". *Reuters*. Retrieved 25 February 2013.
- [81] International Astronomical Union Decides Against Naming Pluto Moon 'Vulcan', [theatlantic.com](http://theatlantic.com).

## 14 External links

- Vulcanalia article in Smith's Dictionary of Greek and Roman Antiquities
- The Forge of Vulcan engravings (E. Vico and P. del Po)<sup>2</sup>

## 15 Text and image sources, contributors, and licenses

### 15.1 Text

- **Vulcan (mythology)** *Source:* [http://en.wikipedia.org/wiki/Vulcan%20\(mythology\)?oldid=637345124](http://en.wikipedia.org/wiki/Vulcan%20(mythology)?oldid=637345124) *Contributors:* Bryan Derksen, AstroNomer, Heron, Tucci528, Ihcoyc, Darkwind, Julesd, Norwikian, EALacey, Steinsky, Paul-L, Earthsound, Renato Caniatti, Wetman, Robbot, Lowellian, Samrolken, David Edgar, GreatWhiteNortherner, Danjel, Peruvianllama, Luigi30, Matt Crypto, Jastrow, Bacchiad, OldakQuill, OverlordQ, MisfitToys, Armaced, AlexanderWinston, D6, Davidbod, Jkl, Randee15, Silence, Smyth, Narsil, S.K., Aranel, El C, Kwamikagami, QuartierLatin1968, Shanes, Art LaPella, Jpgordon, Robotje, Clarkbhm, Jumbuck, Red Winged Duck, Anthony Appleyard, Arthena, Atlant, Monaco, Mlm42, Snowolf, Wtmitchell, Drat, Rednaxela, Kelisi, Shikai shaw, Ashmoo, Magister Mathematicae, BD2412, Mendaliv, Саша Стефановић, Terribleman, Himasaram, Vegaswikian, DoubleBlue, FlaBot, Gurch, Bornhj, Uvaduck, Eamon-nPKean, Roboto de Ajvol, Satanael, YurikBot, TSO1D, Rtkat3, GSchjetne, Pigman, Palladinus, Kurt Leyman, Bobcat7, Grafen, ImGz, DeadEyeArrow, CNichols, Botteville, Salmanazar, Teltnuag, Junglecat, Banus, Eenu, Attilios, SmackBot, Mdiamante, WookieInHeat, Dell-dot, Thunder Wolf, Trystan, Donama, Hmains, Amatulic, Chris the speller, Bluebot, Ghbarratt, Jordanhurley, Colonies Chris, NYKevin, Can't sleep, clown will eat me, MeekSaffron, Apostolos Margaritis, Rrburke, Jagganath, Richard0612, Vina-iwbot, Vidioman, Ugur Basak Bot, SashatoBot, Delphii, Kuru, Scientizzle, GetFighted--, The Man in Question, BillFlis, Xiaphias, Neddysagoon, Midnightblueowl, MTSbot, BananaFiend, Lucio Di Madaura, Tawkerbot2, Speyeker, WeggeBot, Karenjc, ADyuaa, Senorelroboto, ChristTrekker, Grahamec, The Great Honker, Tawkerbot4, Epbr123, Cimbalom, Managore, Marek69, JustAGal, Strikemyheart, AntiVandalBot, QuiteUnusual, Irish-Pete, Gologfrinchan, Sluzzelin, ImmOrtal, JAnDbot, Panarjedde, Rotherpe, Cynwolfe, LittleOldMe, VoABot II, JNW, Rivertorch, Am86, Chris G, DerHexer, Simon Peter Hughes, Valerius Tygart, Gjd001, MartinBot, Ravichandar84, J.delanoy, Kimse, Ian.thomson, Paris1127, Salliesatt, Ignatzmice, Chiswick Chap, Saikokira, Squids and Chips, VolkovBot, ICE77, Jeff G., Soliloquial, Philip Trueman, TXiKiBoT, Eve Hall, Java7837, Vipinhari, GDonato, Mark Miller, Jackfork, Maxim, Synthebot, Art8641, RaseaC, Beautifulangel88, Ponyo, SieBot, StAnselm, Jauerback, Caltas, France3470, Chromaticity, Sitush, Martarius, ClueBot, EoGuy, Podzemnik, CSI Bully, Mild Bill Hiccup, CounterVandalismBot, Abrech, Sun Creator, SchreiberBike, Muro Bot, EncyclopediaUpdaticus, Dylan38, Versus22, Yte0012, Smarkflea, Qwfp, SoxBot III, Wecl0me12, Flyingty, XLinkBot, Addbot, GorleyVMC, Killpk2000, LaaknorBot, Glane23, SamatBot, Tide rolls, Jan eissfeldt, Vasil, Zorrobot, Legobot, Luckas-bot, Yobot, Che!, Fragggle81, Boulevardier, Oldsunnygirl, Wikipedian2, Guy1890, ArchonMag-nus, JackieBot, AdjustShift, Kingpin13, Materialscientist, Bouron, Citation bot, ArthurBot, MauritsBot, Xqbot, Addihockey10, Capri-corn42, Ruby.red.roses, GrouchoBot, Svchost.exe, No More Mr Nice Guy, Omnipaedista, RibotBOT, Kyng, Relishedarc, Dougofborg, FrescoBot, Drdhalval2785, Uzumaki42, Endofskull, Pinethicket, MastiBot, Katerenka, Böri, Aldrasto, Ripchip Bot, EmausBot, M. Adiputra, John of Reading, RA0808, Slightsmile, Tommy2010, Wikipelli, Xdr2, Aldrasto11, H3llBot, Thine Antique Pen, Senjuto, Philafrenzy, Carmichael, DennisIsMe, Scipiouse, MacStep, Sherwood Cat, Cgtdk, ClueBot NG, Jack Greenmaven, CocuBot, Baseball Watcher, Mot-tenen, 149AFK, MerlIwBot, Sniperguy1998, Jbair39, Helpful Pixie Bot, Pwill73, Rmkuruvilla, Vagobot, Frze, Davidiad, Chris1046, DPL bot, Blurthouse, ADA - DÁP, Dexbot, Gearhead Shem Tov, SamX, CensoredScribe, JadeGuardian, Iceman2kold, AddWittyNameHere, Monkbot, ChamithN and Anonymous: 284

### 15.2 Images

- **File:Andrea\_Mantegna\_045.jpg** *Source:* [http://upload.wikimedia.org/wikipedia/commons/7/75/Andrea\\_Mantegna\\_045.jpg](http://upload.wikimedia.org/wikipedia/commons/7/75/Andrea_Mantegna_045.jpg) *License:* Public domain *Contributors:* The York Project: *10.000 Meisterwerke der Malerei*. DVD-ROM, 2002. ISBN 3936122202. Distributed by DIRECTMEDIA Publishing GmbH. *Original artist:* Andrea Mantegna
- **File:Bas\_relief\_from\_Arch\_of\_Marcus\_Aurelius\_showing\_sacrifice.jpg** *Source:* [http://upload.wikimedia.org/wikipedia/commons/7/78/Bas\\_relief\\_from\\_Arch\\_of\\_Marcus\\_Aurelius\\_showing\\_sacrifice.jpg](http://upload.wikimedia.org/wikipedia/commons/7/78/Bas_relief_from_Arch_of_Marcus_Aurelius_showing_sacrifice.jpg) *License:* GFDL *Contributors:* Own work *Original artist:* User: MatthiasKabel
- **File:Commons-logo.svg** *Source:* <http://upload.wikimedia.org/wikipedia/en/4/4a/Commons-logo.svg> *License:* ? *Contributors:* ? *Original artist:* ?
- **File:Diego\_Velasquez\_The\_Forge\_of\_Vulcan.jpg** *Source:* [http://upload.wikimedia.org/wikipedia/commons/7/7f/Diego\\_Velasquez%2C\\_The\\_Forge\\_of\\_Vulcan.jpg](http://upload.wikimedia.org/wikipedia/commons/7/7f/Diego_Velasquez%2C_The_Forge_of_Vulcan.jpg) *License:* Public domain *Contributors:* Own work *Original artist:* Diego Velázquez
- **File:She-wolf\_suckles\_Romulus\_and\_Remus.jpg** *Source:* [http://upload.wikimedia.org/wikipedia/commons/6/6a/She-wolf\\_suckles\\_Romulus\\_and\\_Remus.jpg](http://upload.wikimedia.org/wikipedia/commons/6/6a/She-wolf_suckles_Romulus_and_Remus.jpg) *License:* Public domain *Contributors:* Own book scan from Emmanuel Müller-Baden (dir.), *Bibliothek des allgemeinen und praktischen Wissens*, I, Deutsches Verlagshaus Bong & Co, Berlin-Leipzig-Wien-Stuttgart, 1904. Image copied from de:Bild:Kapitolinische-woelfin 1b-640x480.jpg *Original artist:* Benutzer:Wolpertinger on WP de
- **File:Statuette\_Vulcanus\_MBA\_Lyon\_A1981.jpg** *Source:* [http://upload.wikimedia.org/wikipedia/commons/c/cf/Statuette\\_Vulcanus\\_MBA\\_Lyon\\_A1981.jpg](http://upload.wikimedia.org/wikipedia/commons/c/cf/Statuette_Vulcanus_MBA_Lyon_A1981.jpg) *License:* CC BY 2.5 *Contributors:* Marie-Lan Nguyen (User:Jastrow), 2008-12-26 *Original artist:* ?
- **File:Translation\_to\_english\_arrow.svg** *Source:* [http://upload.wikimedia.org/wikipedia/commons/8/8a/Translation\\_to\\_english\\_arrow.svg](http://upload.wikimedia.org/wikipedia/commons/8/8a/Translation_to_english_arrow.svg) *License:* CC-BY-SA-3.0 *Contributors:* Transferred from en.wikipedia; transferred to Commons by User:Faijl.ladislav using CommonsHelper. *Original artist:* tkgd2007. Original uploader was Tkgd2007 at en.wikipedia

### 15.3 Content license

- Creative Commons Attribution-Share Alike 3.0