

# DOWNLOAD PDF Z)-7-DEDECEN-1-YL ACETATE, THE SEX PHEROMONE OF THE FEMALE ASIAN ELEPHANT

## Chapter 1 : Asian elephant | Revolv

*Purification, Identification, Concentration and Bioactivity of (Z)Dodecenyl Acetate: Sex Pheromone of the Female Asian Elephant, Elephas maximus.*

The genetic divergence of Borneo elephants warrants their recognition as a separate Evolutionarily Significant Unit. Discuss April A 5-month-old calf and its month-old cousin in a sanctuary in Laos Elephants are crepuscular. At times, they scrape the soil for clay or minerals. Adult females and calves move about together as groups, but adult males disperse from their mothers when reaching adolescence. Until recently, Asian elephants, like African elephants, were thought to typically follow the leadership of older adult females, or matriarchs. But females form extensive and very fluid social networks, with varying degrees of associations between individuals. Adults are largely invulnerable to natural predation. There is a singular anecdotal case of a mother Asian elephant allegedly being killed alongside her calf, however this may well be dubious. Strong fights over access to females are extremely rare. Bulls reach sexual maturity around the age of 12” Between the age of 10 and 20 years, bulls undergo an annual phenomenon known as " musth ". This is a period where the testosterone level is up to times greater than non-musth periods, and they become aggressive. Secretions containing pheromones occur during this period, from the paired temporal glands located on the head between the lateral edge of the eye and the base of the ear. The calf is fully developed by the 19th month, but stays in the womb to grow so that it can reach its mother to feed. Once a female gives birth, she usually does not breed again until the first calf is weaned, resulting in a four to five year birth interval. Females stay on with the herd, but mature males are chased away. They live on average for 60 years in the wild and 80 in captivity. A principal component thereof, Z dodecenyl acetate, has also been found to be a sex pheromone in numerous species of insects. At most seasons of the year, Asian elephants are timid and much more ready to flee from a foe than to attack. However, solitary rogues are frequently an exception to this rule, and sometimes make unprovoked attacks on passers-by. Rogue elephants sometimes take up a position near a road, making it impassable to travellers. Females with calves are at all times dangerous to approach. When an Asian elephant makes a charge, it tightly curls up its trunk and attacks by trampling its victim with feet or knees, or, if a male, by pinning it to the ground with its tusks. During musth , bulls are highly dangerous, not only to human beings, but also to other animals. At the first indications, trained elephants are secured tightly to prevent any mishaps. There is also one case of a rogue elephant having actually consumed a human, an attack merited to be extremely unnatural. The elephant, a rogue female, had previously lost her calf to an accident involving farmers. This grievous loss led the elephant to target humans first as a threat, and then as a food source as her mental state deteriorated until she was finally killed and later dissected, revealing through DNA analysis that she had indeed consumed human flesh. Captive elephants The first historical record of the domestication of Asian elephants was in Harappan times. Their ability to work under instruction makes them particularly useful for carrying heavy objects. They have been used particularly for timber -carrying in jungle areas. Other than their work use, they have been used in war, in ceremonies, and for carriage. The KIA use about four dozen elephants to carry supplies. The same purpose is met in safaris in modern times. They are poached for ivory and a variety of other products including meat and leather. Destruction of forests through logging , encroachment, slash-and-burn , shifting cultivation , and monoculture tree plantations are major threats to the survival of elephants. Human”elephant conflicts occur when elephants raid crops of shifting cultivators in fields, which are scattered over a large area interspersed with forests. Depredation in human settlements is another major area of human”elephant conflict occurring in small forest pockets, encroachments into elephant habitat, and on elephant migration routes. Populations inhabiting small habitat fragments are much more liable to come into conflict with humans. Development such as border fencing along the India-Bangladesh border has become a major impediment to the free movement of elephants. In Thailand , the illegal trade in live elephants and ivory still flourishes. Although the quantity of worked ivory seen openly for

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sale has decreased substantially since , Thailand still has one of the largest and most active ivory industries seen anywhere in the world. Tusks from Thai poached elephants also enter the market; between and at least 24 male elephants were killed for their tusks. Before , there were few tourists and the low demand for worked ivory could be supplied by domestic elephants. In four skinned elephants were found in a Myanmar forest. Twenty-six elephants were killed by poachers in The number jumped to 61 in According to the NGO , Elephant Family , the main source of elephant skin is, at present, Myanmar, where a poaching crisis has developed rapidly since About half of the global zoo elephant population is kept in European zoos, where they have about half the median life span of conspecifics in protected populations in range countries. This discrepancy is clearest in Asian elephants: One risk factor for Asian zoo elephants is being moved between institutions, with early removal from the mother tending to have additional adverse effects. Another risk factor is being born into a zoo rather than being imported from the wild, with poor adult survivorship in zoo-born Asians apparently being conferred prenatally or in early infancy. First year mortality is nearly 30 per cent, and fecundity is extremely low throughout the prime reproductive years. Of captive calves born, died prematurely. The sex ratio of stillbirths in Europe was found to have a tendency for excess of males. Elephants in Kerala culture and Cultural depictions of elephants The elephant plays an important part in the culture of the subcontinent and beyond, being featured prominently in the Panchatantra fables and the Buddhist Jataka tales. They play a major role in Hinduism: Elephants are frequently used in processions where the animals are adorned with festive outfits. The elephant is depicted in several Indian manuscripts and treatises. Notable amongst these is the Matanga Lila elephant sport of Nilakantha. In the Burmese, Thai and Sinhalese animal and planetary zodiac , the elephant, both tusked and tuskless, are the fourth and fifth animal zodiacs of the Burmese , the fourth animal zodiac of the Thai , and the second animal zodiac of the Sinhalese people of Sri Lanka.

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## Chapter 2 : Niassa Elephants by simone basini - Issuu

*The discovery of the female-to-male sex pheromone, (Z)dodecenyl acetate, in Asian elephants reveals that specific chemical signals with important functions exist. Tracking the production of such signals and increasing our awareness of the behaviours related to mate selection and copulation will enhance our understanding of the elephant.*

The genetic divergence of Borneo elephants warrants their recognition as a separate Evolutionarily Significant Unit. At times, they scrape the soil for clay or minerals. Adult females and calves move about together as groups, but adult males disperse from their mothers when reaching adolescence. Until recently, Asian elephants, like African elephants, were thought to typically follow the leadership of older adult females, or matriarchs. But females form extensive and very fluid social networks, with varying degrees of associations between individuals. Adults are largely invulnerable to natural predation. There is a singular anecdotal case of a mother Asian elephant allegedly being killed alongside her calf, however this may well be dubious. Strong fights over access to females are extremely rare. Bulls reach sexual maturity around the age of 12” Between the age of 10 and 20 years, bulls undergo an annual phenomenon known as " musth ". This is a period where the testosterone level is up to times greater than non-musth periods, and they become aggressive. Secretions containing pheromones occur during this period, from the paired temporal glands located on the head between the lateral edge of the eye and the base of the ear. The calf is fully developed by the 19th month, but stays in the womb to grow so that it can reach its mother to feed. Once a female gives birth, she usually does not breed again until the first calf is weaned, resulting in a four to five year birth interval. Females stay on with the herd, but mature males are chased away. They live on average for 60 years in the wild and 80 in captivity. A principal component thereof, Z dodecenyl acetate, has also been found to be a sex pheromone in numerous species of insects. At most seasons of the year, Asian elephants are timid and much more ready to flee from a foe than to attack. However, solitary rogues are frequently an exception to this rule, and sometimes make unprovoked attacks on passers-by. Rogue elephants sometimes take up a position near a road, making it impassable to travellers. Females with calves are at all times dangerous to approach. When an Asian elephant makes a charge, it tightly curls up its trunk and attacks by trampling its victim with feet or knees, or, if a male, by pinning it to the ground with its tusks. During musth , bulls are highly dangerous, not only to human beings, but also to other animals. At the first indications, trained elephants are secured tightly to prevent any mishaps. There is also one case of a rogue elephant having actually consumed a human, an attack merited to be extremely unnatural. The elephant, a rogue female, had previously lost her calf to an accident involving farmers. This grievous loss led the elephant to target humans first as a threat, and then as a food source as her mental state deteriorated until she was finally killed and later dissected, revealing through DNA analysis that she had indeed consumed human flesh. Their ability to work under instruction makes them particularly useful for carrying heavy objects. They have been used particularly for timber -carrying in jungle areas. Other than their work use, they have been used in war, in ceremonies, and for carriage. The KIA use about four dozen elephants to carry supplies. The same purpose is met in safaris in modern times. Threats The pre-eminent threats to Asian elephants today are loss, degradation and fragmentation of habitat, leading in turn to increasing conflicts between humans and elephants. They are poached for ivory and a variety of other products including meat and leather. Destruction of forests through logging , encroachment, slash-and-burn , shifting cultivation , and monoculture tree plantations are major threats to the survival of elephants. Human”elephant conflicts occur when elephants raid crops of shifting cultivators in fields, which are scattered over a large area interspersed with forests. Depredation in human settlements is another major area of human”elephant conflict occurring in small forest pockets, encroachments into elephant habitat, and on elephant migration routes. Populations inhabiting small habitat fragments are much more liable to come into conflict with humans. Development such as border fencing along the India-Bangladesh border has become a major impediment to the free movement of elephants. In Thailand , the illegal trade in live elephants and ivory

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## Chapter 3 : Asian elephant - Infogalactic: the planetary knowledge core

*(Z)dodecenyl acetate (ZAc) is present in the urine of female Asian elephants (Elephas maximus) approaching ovulation and functions as a female-to-male sex pheromone.*

Taxonomy Sri Lankan elephants Carl Linnaeus first described the genus *Elephas* and an elephant from Ceylon under the binomial *Elephas maximus* in Results of genetic analysis indicate that its ancestors separated from the mainland population about , years ago. This research is considered vital, as less than wild Asian elephants remain in Laos. The Chinese elephant is sometimes separated as *E.* This population, along with the Indian elephant, was considered the best war elephant in antiquity, and was found superior to the smallish North African elephant *Loxodonta africana pharaoensis* used by the armies of Carthage. The back is convex or level. The ears are small with dorsal borders folded laterally. It has up to 20 pairs of ribs and 34 caudal vertebrae. The feet have more nail-like structures than those of African elephants—five on each forefoot, and four on each hind foot. On average, the shoulder height of males rarely exceeds 2. The trunk contains as many as 60, muscles, which consist of longitudinal and radiating sets. The longitudinals are mostly superficial and subdivided into anterior, lateral, and posterior. The deeper muscles are best seen as numerous distinct fasciculi in a cross-section of the trunk. The trunk is a multipurpose prehensile organ and highly sensitive, innervated by the maxillary division of the trigeminal nerve and by the facial nerve. Elephants use their trunks for breathing, watering, feeding, touching, dusting, sound production and communication, washing, pinching, grasping, defense and offense. The length may vary from 1. Muscular and tendinous ability combined with nervous control allows extraordinary strength and agility movements of the trunk, such as sucking and spraying of water or dust and directed air flow blowing. Elephants will playfully wrestle with each other using their trunks, but generally use their trunks only for gesturing when fighting. They are known to be right or left tusked. The enamel plates of the molars are greater in number and closer together in Asian elephants. Some males may also lack tusks; these individuals are called "filsy makhnas", and are especially common among the Sri Lankan elephant population. Furthermore, the forehead has two hemispherical bulges, unlike the flat front of the African elephant. Unlike African elephants which rarely use their forefeet for anything other than digging or scraping soil, Asian elephants are more agile at using their feet in conjunction with the trunk for manipulating objects. They can sometimes be known for their violent behaviour. Their wrinkled skin is movable and contains many nerve centers. It is smoother than that of African elephants, and may be depigmented on the trunk, ears, or neck. Its folds increase surface area for heat dissipation. They can tolerate cold better than excessive heat. Skin temperature varies from 24 to Body temperature averages Elephant cognition Asian elephants are highly intelligent and self-aware. Elephants have a greater volume of cerebral cortex available for cognitive processing than all other existing land animals, and extensive studies place elephants in the category of great apes in terms of cognitive abilities for tool use and tool making. Elephants are reported to go to safer ground during natural disasters like tsunamis and earthquakes, although there have been no scientific records of this since it is hard to recreate or predict natural disasters. In Bangladesh , some isolated populations survive in the south east Chittagong Hills. The herd was estimated at about 60 individuals in

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### Chapter 4 : ASIAN ELEPHANT : definition of ASIAN ELEPHANT and synonyms of ASIAN ELEPHANT (En

*However, the best candidate for a female sex pheromone in mammals is (Z)dodecenyl acetate in the Asian elephant, which is released in urine during oestrus. In males this compound elicits flehmen behaviourâ€”curling back of the upper lip and inhalation with the nostrils closedâ€”which is thought to facilitate further chemosensation by the.*

In Bangladesh only isolated populations survive in the Chittagong Hills. Until recently it was thought that Asian elephants, like African elephants, typically follow the leadership of older adult females, or matriarchs. But recently it has been shown that females can form extensive and very fluid social networks, with a lot of individual variation in the degree of gregariousness. At times they scrape the soil for clay or minerals. Elephants are able to distinguish low amplitude sounds. Krishnan and later studied by Katharine Payne. Strong fights over access to females are extremely rare. Bulls reach sexual maturity around the age of 12â€” Between the age of 10 to 20 years, bulls undergo an annual phenomenon known as " musth ". This is a period where the testosterone level is up to times greater than non-musth periods, and they become extremely aggressive. Secretions containing pheromones occur during this period, from the paired temporal glands located on the head between the lateral edge of the eye and the base of the ear. The calf is fully developed by the 19th month but stays in the womb to grow so that it can reach its mother to feed. Once a female gives birth, she usually does not breed again until the first calf is weaned, resulting in a 4â€”5-year birth interval. Females stay on with the herd, but mature males are chased away. At most seasons of the year Asian elephants are timid and much more ready to flee from a foe than to make an attack. However, solitary rogues are frequently an exception to this rule, and sometimes make unprovoked attacks on passers-by. Rogue elephants sometimes take up a position near a road making it impassable to travellers. Females with calves are at all times dangerous to approach. When an Asian elephant makes a charge, it tightly curls up its trunk and attacks by trampling its victim with feet or knees, or, if a male, by pinning it to the ground with its tusks. During musth bulls are highly dangerous, not only to human beings but also to its fellow animals. At the first indications, trained elephants are secured tightly to prevent any mishaps. A grander animated object than a wild elephant in full charge can hardly be imagined. The cocked ears and broad forehead present an immense frontage; the head is held high, with the trunk curled between the tusks, to be uncoiled in the moment of attack; the massive fore-legs come down with the force and regularity of ponderous machinery; and the whole figure is rapidly foreshortened, and appears to double in size with each advancing stride. The trunk being curled and unable to emit any sound, the attack is made in silence, after the usual premonitory shriek, which adds to its impressiveness. The usual pictorial representations of the Indian elephant charging with upraised trunk are accordingly quite incorrect. The elephant namely Soman at the elephant training centre, Konni , Pathanamthitta Sri Lankan elephants at Esala Perahera The first historical record of the domestication of Asian elephants was in Harappan times. Their ability to work under instruction makes them particularly useful for carrying heavy objects. They have been used particularly for timber-carrying in jungle areas. Other than their work use, they have been used in war, in ceremonies, and for carriage. They have been used for their ability to travel over difficult terrain by hunters, for whom they served as mobile hunting platforms. The same purpose is met in safaris in modern times. In India alone, over people are killed by elephants every year, affecting nearly , families across the country. Results of genetic analysis indicate that its ancestors separated from the mainland population about , years ago. This research is considered vital as there are less than wild Asian elephants remaining in Laos. The Chinese Elephant is sometimes separated as E. This population, along with the Indian elephant, was considered the best war elephant in antiquity, and was found superior to the smallish North African Elephant *Loxodonta africana pharaoensis* used by the armies of Carthage. It plays a major role in Hinduism: Elephants have been used in processions in Kerala where the animals are adorned with festive outfits. The latter manuscript is from Assam in northeast India.

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## Chapter 5 : Asian elephant - Wikipedia

*For instance, the insect pheromone Zdodecenyl acetate has also been identified from the Asian elephant (*Elephas maximus*; Rasmussen et al. ) and so has received some attention as a.*