

JUNGLE CAT

Adapting to densely populated urban areas by *Felis chaus*



Second record of the Jungle Cat at the Wildlife Rescue Center on the campus of Jahangirnagar University, 24 July 2009

IUCN Red List:
Least Concern
(Gray et al. 2016)

Mammalia
[Class of Mammals]

Carnivora
[Order of flesh eating mammals]

Felidae
[Family of Cats]

Felis chaus
[Jungle Cat]

Species described by
Schreber in 1777

Although a relatively widespread felid across the Indian subcontinent (Nowell & Jackson 1996; Duckworth et al. 2008), the Jungle Cat *Felis chaus* may be suffering a range-wide decline due to the degradation of grassland and open woodland habitats (Duckworth et al. 2005). As few studies have thoroughly investigated the Jungle Cat's ecology, it is difficult to characterize their habitat requirements with any specificity. Some studies have reported that jungle cats are common around human villages, mixed-use agricultural habitats, and suburban areas (Sanyal 1998; Sharma 1998; Singh 1998). In Bangladesh, there has been little to no information on their ability to use predominantly urban areas, and Khan (2004) suggested they weren't present in towns or cities.

In the summer of 2009, we recorded photos of a male Jungle Cat on two independent occasions (08:21hr, 13 July; 05:48hr, 24 July) in a forest fragment on the campus

of Jahangirnagar University, Savar, Bangladesh. Photos were recorded using Moultrie trail cameras established to document the behaviour of Golden Jackals *Canis aureus*, which were known to frequently use the area. These records represent the first confirmation of the occurrence of the Jungle Cat on campus and were taken at the Wildlife Rescue Center, a part of campus with small intact pockets of forests, grassland, and isolated ponds that is operated by the University's Department of Zoology.

Jahangirnagar University is spread out across 2.8km² and is located approximately 32km from downtown Dhaka, one of the most densely populated cities in the world (BBS 2014). The University is well known for the several lakes and wetlands on campus, which are considered important wintering habitat for birds during migration. Access to the area known as the Wildlife Rescue Center is restricted for the purposes of treating and rehabilitating injured wildlife, as well as conducting small-scale wildlife studies that are related to University courses.

More than 20 years ago, a Jungle Cat kitten was reportedly caught on the Jahangirnagar University campus, but details of this event appear to be lacking (Khan 2004). Khan (1986) stated that the Jungle Cat was the most widely distributed felid in Bangladesh, and that they occurred in "scrub jungle, scattered forests, bamboo brakes, mass graveyards in villages, and all forests throughout the country". He referenced a single jungle cat shot in a busy residential part of Dhaka in 1978, which is now in the Museum of Zoology at the University of Dhaka; this suggests some ability of the felid to use urban areas. Eighteen years later, Khan (2004) believed the Jungle Cat was still the most common and widely distributed felid species in Bangladesh, which suggests its status had not changed much, despite the Bangladesh having the highest annual population growth rate in Asia (BBS 2014).

Many mesocarnivore populations are able to persist among increasingly urbanized environments (Gehrt et al. 2010). Coyotes *Canis latrans* in North America and Golden Jackals *Canis aureus* in Bangladesh are commonly known to enter urban areas

Global Distribution :

Afghanistan, Armenia, Azerbaijan, Bangladesh, Bhutan, Cambodia, China, Egypt, Georgia, India, Iran, Islamic Republic of; Iraq, Israel, Jordan, Kazakhstan, Lao People's Democratic Republic, Lebanon, Myanmar, Nepal, Pakistan, Russian Federation, Sri Lanka, Syrian Arab Republic, Tajikistan, Thailand, Turkey, Turkmenistan, Uzbekistan, Viet Nam (Schreber, 1777)



Map of the general study area region, which depicts the intensive urbanization and land use changes surrounding the Jahangirnagar University campus; the area inside the box includes the Wildlife Rescue Center as well as other adjacent, potential 'refuge' habitat for Jungle Cats

in search of food, even adapting successfully to urban or suburban life (Jaeger et al. 2007; Grubbs & Krausman 2009). Opportunistic small felid species such as Bobcats *Lynx rufus* are also known to utilize suburban neighborhoods in proximity to large expanses of more suitable habitat (Riley et al. 2003; Ice 2013). As the human population pressures increase stabilization in declining jungle cat populations might in part depend on the ability of the species to survive in more urbanized landscapes. Urban planning that accounts for more open space and includes small parks that contain 'islands' of mixed grassland/forest habitat could maintain sufficient levels of rodent prey, which are important for Jungle Cats and other Asian mesocarnivore species (Mukherjee et al. 2004). This recent record of a jungle cat using small isolated habitats in such a landscape may be indicative of a broader adaptability in the species beyond mere agricultural fields and degraded grasslands, but much more intensively modified environments.

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