

Additions to the Ichthyo-faunal diversity in Luni River, near Luni town, Jodhpur (Rajasthan)

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Luni, one of the most important seasonal river of Western Rajasthan, flows only during the rainy season. Luni's basin is situated in between 24° 11' to 26° 43' North latitude and 70° 37' to 74° 39' East longitude approximately. Luni starts from western slopes of the Aravali range at an elevation of 550 m, near Ajmer, and after traversing a distance of about 500km in a south-westerly direction through the districts of Ajmer, Pali, Jodhpur, Nagaur, Barmer, Jalore and Sirohi in Rajasthan, the river ends in the swampy land of Rann of Kachchh in Gujarat.

Its main tributaries are the Sukri, Mithri, Bandi, Khari, Jawai, Guhiya and Sagi from the left, and the Jojari River from the right. This river serves as a primary source of irrigation in the region. Primarily, it is not saline up to Balotara district but, gradually becomes saline when it meets the saline land in this area. This river has a tendency to increase its width rather than deepening the bed because the banks are made up of soil only.

Present research communication deals with studies on the fish diversity of river Luni at Luni junction, near Jodhpur city. Present research work was carried out in September, 2016. Monsoon rains average during July-September, 2016 in Jodhpur region have provided good amount of water in the Luni River from its catchment area which initiated the present investigation work. The paper reports presence of five species of fishes during the month of September, 2016 from Luni River in aforesaid area. Cypriniformes & Cyprinodontiformes were the dominant order of fishes each represented by two spp., followed by Perciformes with one species only.

Material and Methods

Fishes were collected mainly by using cast net. Hand net and scoop net were also used. The fishes were preserved in 10% formalin for further studies and were identified following Talwar & Jhingran (1991), Jayaram (1999) and Froese & Pauly (2014) i.e. www.fishbase.org, [version (06/2016)].

Results and Discussion

Yazdani (1996) has described a total of 142 species from the whole Thar Desert, out of which 112 species belonging to 64 genera 26 families and six orders were described from the Thar region of Rajasthan. Johal et al. (2000) have described 57 spp. of fish from the Thar Desert of

Rajasthan, whereas Mohan & Singh (2006) reported 80 species of fish from the same region of the Thar Desert. Earlier Banyal (2012) has reported three spp. of fish from Luni River near Kankani village of Jodhpur district. Subsequently, Banyal & Kumar (2014) have reported eight spp. of fish from Luni River at Sancho region of Rajasthan state. The present work reported five spp. of fish from this river.

Present observations justify presence of *Aphanius dispar* (Ruppell) in large numbers in this river as this fish tolerates slightly saline water. Similarly *Channa punctata* (Bloch) is also a hardy fish which can survive in adverse conditions. *Gambusia affinis* (Baird & Girard) is an introduced fish for mosquito control. *Salmophasia bacaila* (Ham.-Buch.) has been reported first time from the Luni River.

The above mentioned fishes are not important commercially but these fishes offer ideal habitat for utilization by piscivorous indigenous and migratory birds which visit this wetland ecosystem especially, during winter months. Hence, this ecosystem forms a vital part of the food chain of this region. Maintenance of critical water level by agencies in this river will facilitate food to the piscivorous birds dependent on this wetland.

List of the fishes reported from the river with classification and their IUCN (2012) status is given in Table I. According to the IUCN 2012, all the five species are of 'Least Concern' status.

Table I. Fishes in the Luni river, Rajasthan.

Species name	IUCN (2012) status
Order Cypriniformes	
Family Cyprinidae	
Subfamily Cyprininae	
1 <i>Pethia ticto</i> (Ham.-Buch.)	LC
2 <i>Salmophasia bacaila</i> (Ham.-Buch.)	LC
Order Cyprinodontiformes	
Family Cyprinodontidae	
3 <i>Aphanius dispar</i> (Ruppell)	LC
Family Poeciliidae	
4 <i>Gambusia affinis</i> (Baird & Girard)	LC
Order Perciformes	
Family Channidae	
5 <i>Channa punctata</i> (Bloch.)	LC

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Regrow Saffron to help Afghanistan

AILI McCONNON

Bomb-blasted roads, frequent blackouts, shortages of basic equipment and an untested consumer market are hardly conditions that make for natural entrepreneurial opportunities.

But three Army veterans and one civilian, who all served in Afghanistan, have taken on those challenges in their new venture. Their company, Rumi Spice, buys saffron from Afghan farmers and sells it to international customers.

Rumi Spice, the company's name was inspired by the 13th century Persian poet. Started two years ago, Rumi Spice now sells saffron that is used by the chefs in renowned restaurants like the French Laundry in California and Daniel in New York. It appeared on the shelves and website of the luxury food seller Dean & DeLuca.

What is Saffron?

Saffron is one of the most expensive spices in the world, costing \$2,500 to \$30,000 a kilogram. A staple in Indian, Moroccan and Persian cuisine, it is also a crucial ingredient in European dishes like Spanish paella and French bouillabaisse. As Americans search out the latest artisanal trends, Afghan saffron is starting to make inroads.

The Rumi Spice founders decided to focus on farmers because 80% of the Afghan population works in agriculture, according to the United States embassy in Kabul.

Growing Saffron

Saffron is expensive because it is difficult to grow and painstaking to harvest. Each amethyst-colored saffron crocus produces just three stigmas. The stigmas are separated by hand from the blossom and then dried into rusty-red threads.

About 150 flowers are needed to produce a single gram of saffron. Afghan saffron has a reputation for being particu-

larly flavourful—in part because of the terrain and harsh climate around Herat, where it is grown.

In 2014, Keith Alaniz, an army engineer officer who worked with regional governments in Afghanistan, approached his friend Kimberly Jung, whom he had met while working for the Army Corps of Engineers after Hurricane Sandy in New York, about the idea of marketing Afghan saffron.

Jung had been an army engineer officer who searched for roadside bombs in Afghanistan. She was then at Harvard Business School with Emily Miller, also a former army engineer officer, who had assisted Special Operations on night raids.

The company's fourth founder, Carol Wang, had worked in Afghanistan on a World Bank-backed rural development programme.

Start of Rumi Spice

Rumi Spice worked with 34 farmers in 2015. The company plans to work with more than 80 farmers for this year's harvest in October and November. The next step was to open a processing plant. In April 2015, Rumi Spice began a Kickstarter campaign and raised nearly \$33,000 in less than two months. The processing plant, based in Herat, employed 75 Afghan women in 2015.

In 2016, Rumi Spice is on track to reach its projected revenue of \$500,000 for the year.

Hivers and Strivers and Golden Seeds, an investing group that backs start-ups created by women, have invested a combined \$272,000.

Rumi Spice has hired locals to help provide security for the operations in Afghanistan. Abdul Shakoor Ehrarri, an agricultural specialist manages the saffron processing plant.