

Kingdom	Phylum	Class	Order	Family
Animalia	Chordata	Actinopterygii	Perciformes	Lutjanidae

**Common name** kunyit (Malay, Malaysia), hamra (Arabic, Oman), common blue-stripe snapper (English, Papua New Guinea), nisar (Arabic, Oman), blouband snapper (Afrikaans, South Africa), common bluestripe snapper (English), kuning-kuning (Malay, Malaysia), ikan nonya (Malay, Christmas Island), bluestripe snapper (English, Christmas Island), hobara (Arabic, Saudi Arabia), gorara tikus (Malay, Indonesia), taape (English), yosuji-fuedai (Japanese, Japan), yellow and blue seaperch (English, USA), madras (French, Seychelles), blueline snapper (English), vivaneau à raies bleues (French, Djibouti, France), bluestripe seaperch (English), merah (Malay, Malaysia), blue-lined sea perch (English, French Polynesia), kunyit-kunyit (Malay, Malaysia), bluestriped snapper (English, USA), blue-banded hussar (English), tanda-tanda (Malay, Malaysia), bluebanded snapper (English, South Africa), irri ranna (Sinhalese, Sri Lanka), pargo de raios azuis (Portuguese, Mozambique), savane (Samoan, Samoa), pla kapong (Thai, Thailand), pla ka pong deng thab nam ngern (Thai, Thailand), keleia (Swahili, United Republic of Tanzania), janja (Swahili, United Republic of Tanzania), blue-lined snapper fish (English), bluelined snapper (English, Guam, Micronesia (Federated States of), Niue), pargo de rayas (Spanish), vali ranna (Sinhalese, Sri Lanka), pargo de rayas azules (Spanish, Spain), verikeechan (Tamil, Sri Lanka), tembo-uzi (Swahili, United Republic of Tanzania), mbawaa (Swahili, Kenya), common bluestriped snapper (English), naisarah (Arabic, Kuwait, Saudi Arabia), nga-wet-panni (Burmese, Myanmar), perche à raies bleues (French)

## Synonym

## Similar species

*Lutjanus quinquelineatus*

## Summary

*Lutjanus kasmira* is a commercially important reef-associated tropical fish that has been introduced into Hawaii for fisheries. In introduced areas of Hawaii it has become abundant, forming dense schools. It may outcompete native fish for space, crowding them out of important refuge areas.



[view this species on IUCN Red List](#)

## Species Description

The bluestripe snapper is bright yellow above and white below, with four blue stripes running horizontally across the sides. Fine grey stripes occur ventrally. The fins are mostly yellow (Australian Museum 2006). The male *L. kasmira* can reach a total maximum length of 40cm. Numbers of rays and spines are as follows: dorsal spines: 10 - 10, dorsal soft rays: 14 - 15, anal spines: 3 and anal soft rays: 7 - 8 (FishBase 2006).

## Notes

The population doubling time of the bluestripe snapper is estimated to be between 1.4 and 4.4 years (FishBase 2006).

## Uses

Snappers (Lutjanidae) are among the most important food fishes in the Caribbean (Munro 1983, Allen 1985, Claro 1991, in Heyman *et al.* 2005). The bluestripe snapper is an important commercial and gamefish species. It is also an aquarium fish (FishBase 2006).

## Habitat Description

Bluestripe snapper are reef-associated tropical fish with a temperature range of 20°C to 28°C and a depth range of 3 metres to 265 metres (FishBase 2006). They inhabit coral reefs, occurring in both shallow lagoons and outer reefs and are frequently found in large aggregations around coral, caves or wrecks. Juveniles often inhabit seagrass beds around patch reefs (FishBase 2006) and as they grow move from fringe areas toward the main reef (Friedlander *et al.* 2002). Studies in Hawaii show that *L. kasmira* forms schools along the reefs' edges during the day and forages nocturnally further away from the reef at night. This routine nightly migration leads them to forage on soft-bottomed habitat up to 100 metres from the reef-sand interface (DeFelice and Parrish 2003). In Hawaii the largest individuals occur singly or in small groups on shallow reef slopes while smaller individuals occur in larger groups on the deep slopes and in spur-and-groove habitat (Friedlander *et al.* 2002).

## Reproduction

There is a limited understanding about the reproductive habits of snapper, particularly spawning (Heyman *et al.* 2005). Bluestripe snapper take part in a courtship ritual in which males use their snout to nuzzle, nudge and rub the undersides of females (Heyman *et al.* 2005). Pairs also dance together in spirals towards the surface (Suzuki and Kioki, 1979 in Heyman *et al.* 2005).

## Nutrition

The bluestripe snapper feeds on shrimps, fish, stomatopods, crabs, cephalopods, and planktonic crustaceans. It also takes a variety of algae (FishBase 2006). In an Hawaiian-based study by DeFelice and Parrish (2003) the stomachs of *L. kasmira* (10.0–17.9cm SL) were found to contain mainly small caridean shrimps (especially Ogyrididae) as well as penaeid shrimp, small cryptic fishes, stomatopods (a type of crustacean) and portunid crabs.

Levels of piscivory (fish-eating diet) of the fish can vary with temporal changes in prey abundance. In the Great Barrier Reef, *L. kasmira* shifts to a more piscivorous diet during summer when the young of many species settle on the reef (John 2001). In Hawaii an estimated 40% of its diet is fish (Russo 1994).

## General Impacts

In Hawaii bluestripe snapper share the same habitat with native fishes such as goatfish *Mulloidichthys* sp. (Friedlander *et al.* 2002). This may result in competition for habitat use and food sources. Evidence has been documented which suggests that bluestripe snapper may displace native fish from important refuge habitat. Competition for shelter appears to be the most significant impact detected, with the dominant *L. kasmira* able to displace native fish from areas of the reef which offer protection (Schumacher and Parrish 2005). It has also been argued that the deliberate introduction of *L. kasmira* in Hawaii has lead to the replacement of many other locally important catch species (Russo 1994; FAO 2001). However this remains a controversial topic and more research investigating the ecological niche of *L. kasmira* is needed. Disease transmission to native fish may also occur (Work *et al.* 2003).

## Management Info

Unable to locate any management information for this species.

## Pathway

*L. kasmira* is a demersal (bottom-dwelling) species which has been translocated to new locations intentionally by humans for recreational fishing. For example it was introduced to Hawaii from French Polynesia for food and sport fishing (Friedlander *et al.* 2002).

**Principal source:** [FishBase 2006 \*Lutjanus kasmira\*](#)

**Compiler:** IUCN/SSC Invasive Species Specialist Group (ISSG) with support from La Fondation d'entreprise Total

**Review:** J.D. Parrish. Associate Prof. of Zoology. University of Hawaii, Honolulu, Hawaii USA

**Publication date:** 2007-06-05

## ALIEN RANGE

**[7] UNITED STATES**

**[1] UNITED STATES MINOR OUTLYING ISLANDS**

## BIBLIOGRAPHY

24 references found for ***Lutjanus kasmira***

### Management information

[Centre for Environment, Fisheries & Aquaculture Science \(CEFAS\) ., 2008. Decision support tools-Identifying potentially invasive non-native marine and freshwater species: fish, invertebrates, amphibians.](#)

**Summary:** The electronic tool kits made available on the Cefas page for free download are Crown Copyright (2007-2008). As such, these are freeware and may be freely distributed provided this notice is retained. No warranty, expressed or implied, is made and users should satisfy themselves as to the applicability of the results in any given circumstance. Toolkits available include 1) FISK- Freshwater Fish Invasiveness Scoring Kit (English and Spanish language version); 2) MFISK- Marine Fish Invasiveness Scoring Kit; 3) MI-ISK- Marine invertebrate Invasiveness Scoring Kit; 4) FI-ISK- Freshwater Invertebrate Invasiveness Scoring Kit and AmphISK- Amphibian Invasiveness Scoring Kit. These tool kits were developed by Cefas, with new VisualBasic and computational programming by Lorenzo Vilizzi, David Cooper, Andy South and Gordon H. Copp, based on VisualBasic code in the original Weed Risk Assessment (WRA) tool kit of P.C. Pheloung, P.A. Williams & S.R. Halloy (1999).

The decision support tools are available from:

<http://cefas.defra.gov.uk/our-science/ecosystems-and-biodiversity/non-native-species/decision-support-tools.aspx> [Accessed 13 October 2011]

The guidance document is available from [http://www.cefas.co.uk/media/118009/fisk\\_guide\\_v2.pdf](http://www.cefas.co.uk/media/118009/fisk_guide_v2.pdf) [Accessed 13 January 2009].  
[Mendoza, R.E.; Cudmore, B.; Orr, R.; Balderas, S.C.; Courtenay, W.R.; Osorio, P.K.; Mandrak, N.; Torres, P.A.; Damian, M.A.; Gallardo, C.E.; Sanguines, A.G.; Greene, G.; Lee, D.; Orbe-Mendoza, A.; Martinez, C.R.; and Arana, O.S. 2009. Trinational Risk Assessment Guidelines for Aquatic Alien Invasive Species. Commission for Environmental Cooperation. 393, rue St-Jacques Ouest, Bureau 200, Montréal \(Québec\), Canada. ISBN 978-2-923358-48-1.](#)

**Summary:** In 1993, Canada, Mexico and the United States signed the North American Agreement on Environmental Cooperation (NAAEC) as a side agreement to the North American Free Trade Agreement (NAFTA). The NAAEC established the Commission for Environmental Cooperation (CEC) to help the Parties ensure that improved economic efficiency occurred simultaneously with trinational environmental cooperation. The NAAEC highlighted biodiversity as a key area for trinational cooperation. In 2001, the CEC adopted a resolution (Council Resolution 01-03), which created the Biodiversity Conservation Working Group (BCWG), a working group of high-level policy makers from Canada, Mexico and the United States. In 2003, the BCWG produced the [Strategic Plan for North American Cooperation in the Conservation of Biodiversity](#). This strategy identified responding to threats, such as invasive species, as a priority action area. In 2004, the BCWG, recognizing the importance of prevention in addressing invasive species, agreed to work together to develop the draft CEC Risk Assessment Guidelines for Aquatic Alien Invasive Species (hereafter referred to as the Guidelines). These Guidelines will serve as a tool to North American resource managers who are evaluating whether or not to introduce a non-native species into a new ecosystem. Through this collaborative process, the BCWG has begun to implement its strategy as well as address an important trade and environment issue. With increased trade comes an increase in the potential for economic growth as well as biological invasion, by working to minimize the potential adverse impacts from trade, the CEC Parties are working to maximize the gains from trade while minimizing the environmental costs.

Available from: English version: [http://www.cec.org/Storage/62/5516\\_07-64-CEC%20invasives%20risk%20guidelines-full-report\\_en.pdf](http://www.cec.org/Storage/62/5516_07-64-CEC%20invasives%20risk%20guidelines-full-report_en.pdf) [Accessed 15 June 2010]

French version: [http://www.cec.org/Storage/62/5517\\_07-64-CEC%20invasives%20risk%20guidelines-full-report\\_fr.pdf](http://www.cec.org/Storage/62/5517_07-64-CEC%20invasives%20risk%20guidelines-full-report_fr.pdf) [Accessed 15 June 2010]

Spanish version: [http://www.cec.org/Storage/62/5518\\_07-64-CEC%20invasives%20risk%20guidelines-full-report\\_es.pdf](http://www.cec.org/Storage/62/5518_07-64-CEC%20invasives%20risk%20guidelines-full-report_es.pdf) [Accessed 15 June 2010].

### General information

[Australian Museum. 2006. Bluestripe Seaperch: \*Lutjanus kasmira\* \(Forsskål, 1775\).](#)

**Summary:** Brief description of the fish and distribution in Australia.

Available from: <http://www.amonline.net.au/FISHES/fishfacts/fish/lkasmira.htm> [Accessed 12 January 2007]

[Cook Islands Biodiversity and Natural Heritage. 2005. \*Lutjanus kasmira\*: Bluelined Snapper. Retrieved 3 January 2007, from The Cook Islands Natural Heritage Trust Biodiversity database.](#)

**Summary:** This multimedia database is designed to integrate both scientific and traditional information on Cook Islands flora and fauna.

Available from: <http://cookislands.bishopmuseum.org/species.asp?id=8577> [Accessed 3 January 2007]

DeFelice, R.C. and Parrish, J.D. 2003. Importance of benthic prey for fishes in coral reef-associated sediments, *Pacific Science* 57(4): 359-384.

**Summary:** This study discusses the important trophic role for the sandy habitat adjacent to coral reefs as a food source for fishes.

Available from: [http://muse.jhu.edu/journals/pacific\\_science/v057/57.4defelice.pdf](http://muse.jhu.edu/journals/pacific_science/v057/57.4defelice.pdf) [Accessed 10 January 2007]

DeFelice, R.C., Coles, S.L., Muir, D. and Eldredge, L.G. 1998. *Investigation of the marine communities of Midway Harbor and Adjacent Lagoon, Midway Atoll, Northwestern Hawaiian Islands*. Hawaiian Biological Survey, Bishop Museum: Honolulu.

**Summary:** This marine community survey was conducted in 1997 in Midway Atoll harbor and the surrounding lagoon.

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Emata, A.C. 2003. Reproductive performance in induced and spontaneous spawning of the mangrove red snapper, *Lutjanus argentimaculatus*: a potential candidate species for sustainable aquaculture, *Aquaculture Research* 34: 849-857.

**Summary:** This paper discusses a reliable breeding technique for mangrove red snapper, *Lutjanus argentimaculatus*, an immensely popular aquaculture species in Southeast Asia.

[FishBase, 2006. Species profile: \*Lutjanus kasmira\*. Retrieved 29 December 2006, from FishBase.](#)

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Available from: <http://www.fishbase.org/Summary/speciesSummary.php?ID=156&genusname=Lutjanus&speciesname=kasmira> [Accessed 29 December 2006]

[Food and Agriculture Organisation of the United Nations \(FAO\), 2001. Some External Factors That May Impact Upon the Work of Regional Fishery Bodies and the management of Fisheries. Second Meeting of FAO and Non-FAO Regional Fishery Bodies.](#)

**Summary:** Available from: <http://www.fao.org/DOCREP/MEETING/003/X9428E.HTM> [Accessed 4 January 2007]

[Food and Agriculture Organisation of the United Nations \(FAO\), 2006. \*Lutjanidae\*. In: G.H.P. De Bruin, Russell, B.C., Bogusch, A. \(eds.\). The marine fishery resources of Sri Lanka: FAO Species Identification Field Guide for Fishery Purposes.](#)

**Summary:** Available from: <http://www.fao.org/docrep/T0726E/t0726e00.HTM#Contents> [Accessed 3 January 2007]

Friedlander, A., Aeby, G., Brainard, R., Clark, A., DeMartini, E., Godwin, S., Kenyon, J., Kosaki, R., Maragos, J. and Vroom, P. 2005. *The State of Coral Reef Ecosystems of the Northwestern Hawaiian Islands*.

**Summary:** Available from: [http://ccma.nos.noaa.gov/ecosystems/coralreef/coral\\_report\\_2005/NWHI\\_Ch10\\_C.pdf](http://ccma.nos.noaa.gov/ecosystems/coralreef/coral_report_2005/NWHI_Ch10_C.pdf) [Accessed 10 January 2007]

Friedlander, A.M., Parrish, J.D. and Defelice, R.C. 2002. Ecology of the introduced snapper *Lutjanus kasmira* (Forsskal) in the reef fish assemblage of a Hawaiian bay, *Journal of Fish Biology* 60(1): 28-48.

**Summary:** Includes ecological information and adaptations of *L. kasmira* in a shallow bay in Kauai, Hawaii.

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**Summary:** A case study of a maritime vessel hull fouling as a mode of dispersal.

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**Summary:** This study looks at cubera snapper (*Lutjanus cyanopterus*) spawning events at Gladden Spit Marine Reserve (Belize).

[ITIS \(Integrated Taxonomic Information System\), 2005. Online Database \*Lutjanus kasmira\*](#)

**Summary:** An online database that provides taxonomic information, common names, synonyms and geographical jurisdiction of a species. In addition links are provided to retrieve biological records and collection information from the Global Biodiversity Information Facility (GBIF) Data Portal and bioscience articles from BioOne journals.

Available from: [http://www.itis.gov/servlet/SingleRpt/SingleRpt?search\\_topic=TSN&search\\_value=168862](http://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=168862) [Accessed 8 December 2006]

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**Summary:** This study investigates the spatial competition between the introduced blueline snapper *L. kasmira* and the native yellowtail goatfish *Mulloidichthys vanicolensis*.

Tessier, E., Chabanet, P., Pothin, K., Soria, M. and Lasserre, G. 2005. Visual censuses of tropical fish aggregations on artificial reefs: slate versus video recording techniques, *Journal of Experimental Marine Biology and Ecology* 315: 17-30.

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[UNEP-WCMC \(United Nations Environment Programme World Conservation Monitoring Centre\). 2007. \*Lutjanus kasmira - Distribution\*. Retrieved 3 January 2007, from UNEP-WCMC Species Database.](#)

**Summary:** The UNEP-WCMC species database contains information on species with important conservational value. This page details the distribution of *L. kasmira*.

Available from:

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[UNEP-WCMC \(United Nations Environment Programme World Conservation Monitoring Centre\). 2007. \*Lutjanus kasmira\* - Names. Retrieved 3 January 2007, from UNEP-WCMC Species Database.](#)

**Summary:** The UNEP-WCMC species database contains information on species with important conservational value. This page lists the common names of *L. kasmira*.

Available from:

<http://sea.unep-wcmc.org/isdb/Taxonomy/tax-species-result.cfm?displaylanguage=eng&Genus=Lutjanus&Species=kasmira&source=animal&s&Country=> [Accessed 3 January 2007]

[USGS \(United States Geological Survey\). 2005. \*Lutjanus kasmira\*. Retrieved 8 January 2007, from USGS Nonindigenous Aquatic Species Database.](#)

**Summary:** Details of *L. kasmira* distribution in the USA.

Available from: <http://nas.er.usgs.gov/queries/CollectionInfo.asp?SpeciesID=774&> [Accessed 8 January 2007]

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**Summary:** A paper which addresses a study of the impact of introduced microbial organisms on native Hawaiian fauna. It takes the example of *L. kasmira* (introduced species) infected by an apicomplexan protozoan.

Available from: [http://www.nwhc.usgs.gov/hfs/Globals/Products/TaapeDAO\(57\)59-66.pdf](http://www.nwhc.usgs.gov/hfs/Globals/Products/TaapeDAO(57)59-66.pdf) [Accessed 29 December 2006]