# GLOBAL INVASIVE SPECIES DATABASE

FULL ACCOUNT FOR: ***Anas platyrhynchos***

***Anas platyrhynchos*** 正體中文 **System:** Freshwater_terrestrial

| Kingdom | Phylum | Class | Order | Family |
|---|---|---|---|---|
| Animalia | Chordata | Aves | Anseriformes | Anatidae |

**Common name**

**Synonym** *Anas oustaleti* , Salvadori, 1894
*Anas boschas* , Linnaeus, 1758

**Similar species**

**Summary** The mallard (*Anas platyrhynchos*) is the most common and widely distributed dabbling duck, having a widespread global distribution throughout the northern hemisphere. This migratory species is a highly valued game bird and the source of all domestic ducks with the exception of the Muscovy. Introductions and range expansions of *A. platyrhynchos* for game purposes pose a threat of competition and hybridization to native waterfowl. Also, recent studies hold the mallard as a likely vector for the highly pathogenic avian influenza virus (HPAIV) (H5N1).

view this species on IUCN Red List

**Species Description**
*Anas platyrhynchos* is a medium to large dabbling duck ranging from about 50-60 cm in length and 1-1.3 kg. It is strongly sexually dimorphic. Breeding males bear a distinctive green head, narrow white neck-ring, brown breast, brownish-gray dorsal feathers, pale gray sides and belly, black rump and under tail coverts, white outer tail, and strongly recurved black central tail feathers. Their wings are a pale gray with a distinct iridescent blue upperside and secondaries bordered with white leading and trailing edges, white under-wing coverts, and pale gray undersides. Bills are yellow to olive and legs and feet are orange to red. Females have a broken streaky pattern of buff, white, gray, to black on brown. They have white outer tail feathers and under tail coverts, a white belly, and a prominent dark eyeline. Females have similar wings to males including the distinct blue markings. Their bills are gray-black to orange and legs and feet orange to red. Non-breeding male and juvenile plummages similar to female with males bearing a dark green head and both being darker (Drilling *et al*., 2002; Sibley, 2003).

**Lifecycle Stages**
Only hens care for the young. Mothers do not feed them but rather lead them to food where they feed on their own. Young feed on mostly invertebrates, small crustaceans, molluscs, and fish eggs. Hens stay with the brood until ducklings can fly which usually takes about 50-60 days. Juveniles take initial flights and explore local surroundings. In the autumn they accompany migrating adults but remain subordinate to adults for their first winter. Juveniles reach sexual maturity after 1 year. The recorded for longest life span in the wild is 29 years (Drilling *et al*., 2002).

**Uses**
*Anas platyrhynchos* is an extremely common and highly regarded game bird, which has resulted in many introductions. The mallard is also the source of all domestic duck breeds with the exception of the Muscovy (Drilling *et al*., 2002; JNCC, undated). It is used widely for ornamental purpose.

**Habitat Description**
*Anas platyrhynchos* prefer lowland habitats and inhabit almost every type a freshwater wetland. However, they do avoid oligotrophic, fast flowing, or unvegetated waters. They breed from 70°N in the Arctic, to 35°N in North Africa, and 20°N in the Middle East. Individuals breeding in temperate regions are sedentary and dispersive, while northern breeders are usually migratory. Mallards usually nest in upland meadows but can be found in a wide variety of places close to water providing cover including grasslands, marshes, bogs, riverine floodplains, dikes, ditches, pastures, cropland, shrubland, fencelines, rock piles, and forests. (Drilling *et al*., 2002; JNCC, undated; Snyder, 1993).

**Reproduction**
Oviparous. Sexual. Breeding occurs in the early spring. Nest building begins within 5-10 days of establishing a home range in migratory populations. Clutches may consit of 5-14 eggs (but is usually 8-10) laid at about 1 egg/day. Incubation is performed by the female for about 30 days. Hatchlings are relatively precocial and are able to feed themselves, but they are cared for until they can fly. Fledging occurs within 50-60 days of hatching. Second broods within a breeding season are rare among wild mallards but some in urban or high density environments have been known to birth them. Nesting density depends on available space and predator abundance (Drilling *et al*, 2002; NatureServe, 2008).

**Nutrition**
An opportunistic omnivore, *Anas platyrhynchos* is a generalist feeder. During the breeding season, a mallard's diet consists of primarily animal food sources including insects such as midge larvae, dragonflies, and caddisfly larvae, as well as aquatic invertebrates such as snails, freshwater shrimp, and terrestrial worms. Outside of the breeding season they eat mostly seeds from moist-soil plants, acorns, aquatic vegetation, cereal crops, and wheat (Drilling *et al*., 2002).

**General Impacts**
*Anas platyrhynchos* hybridizes with endemic duck species, some of which are now threatened with extinction. Species experiencing hybridization with mallards include the New Zealand grey duck (*Anas superciliosa*), American black duck *Anas rubripes*, Mexican duck (*Anas platyrhynchos diazi*), Mottled duck (*Anas fulvigula*), the 'Endangered (EN)' Hawaiian Duck (see *Anas wyvilliana* in IUCN Red List of Threatened Species), African black duck (*Anas sparsa*), yellow-billed duck (*Anas undulatta*), and the 'Endangered (EN)' Meller's duck (see *Anas melleri* in IUCN Red List of Threatened Species) (AEWA, 2003; Kulikova *et al*., 2005; Uyehara, 2007; Fox, 2009). As a consequence of introgression, Mexican duck is no longer considered a species and less than 5% of pure non-hybridized grey ducks remain in New Zealand.
In North America and Europe, populations of Mallard are frequently restocked by captive-bred individuals for hunting purposes. Captive individuals hybridize with wild ones which has the potential to threaten the genetic integrity of Mallard. Consequences of this practice are currently under study (Champagnon *et al*., 2009).
Studies have recently indicated that *A. platyrhynchos* is thought to be a long-distance vector for the highly pathogenic avian influenza virus (HPAIV) (H5N1), a serious concern to the poultry industry and public health. Spread of the virus in conjuction with migratory routes and waterfowl infection indicate them as probable vectors. Experiments have shown that mallards are the prime candidate for being the long-distance vector of HPAIV (H5N1) since they excrete significantly higher proportions on the virus than other ducks while they are seemingly immune to its debilitating effects in both studies and wild bird die-offs from HPAIV in Europe and Asia. Furthermore, their extremely wide range and large populations, its presence in nearly every type of wetland, and tolerance to humans provide a potential link to wild waterfowl, domestic animals, and humans rendering it a perfect vector of the deadly HPAIV. Although human infection is rare, this virus has a high fatality rate in infected patients. The possibility of mutation to a more human infectable form and a human-to-human means of transmission, poses a tremendous threat of pandemic proportions.
Additionally, captive reared mallards are believed to increase incidence of some other diseases such as Duck Virus Enteritis (DVE) in wild populations (Keawcharoen, 2008; Weber and Stilianakis, 2007; AEWA, 2003).
Finally, high mallard populations are associated with algal bloom, deoxygenation, and loss of aquatic plants in overpopulated wetlands which can lead to botulism (RSPB, 2008).

**Management Info**
*Anas platyrhynchos* is the most harvested waterfowl in North America and Europe. Hunting and hunting restrictions have served as a population control for mallards for many years. The US Fish and Wildlife Service has adopted adaptive harvest management which utilizes population dynamics and monitoring to regulate mallard hunting in order to better manage *A. platyrhynchos* populations in the United States (Nichols, 2007; USFWS, 2007, Drilling *et al*., 2002).
*A. platyrhynchos* (Mallard) x (*A. superciliosa*) Pacific Black Duck hybrids commonly occur on Lord Howe Island in freshwater and estuarine habitats. A management program using trapping, shooting and opportunistic capture by hand was conducted for five days in October 2007. The majority of ducks were removed by shooting. Hand capture was most efficient but was opportunistic and limited to juveniles and chicks. Trapping was the next most efficient technique but had difficulties with disturbance by the public. Please follow this link for Tracey *et al* (2008) Lord Howe Island Ducks: Abundance, Impacts and Management Options for more details on the management project.

**Pathway**
Farming: Mallard domestic breeds or barnyard ducks are used worldwide for meat (Huang *et al*., 2007). Escapes to the wild are frequent.*Anas platyrhynchos* is an extremely popular game bird and has been introduced to new locations for that reason (Uyehara*et al*., 2007).*Anas platyrhynchos* has been introduced to new locations to stock ponds (Uyehara *et al*, 2007).

**Principal source:** Drilling, Nancy, Rodger Titman and Frank Mckinney. 2002. Mallard (*Anas platyrhynchos*), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: http://bna.birds.cornell.edu/bna/species/658
NatureServe Explorer, 2008. An Online Encyclopedia of Life: *Anas platyrhynchos* - Linnaeus, 1758 Mallard

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**ALIEN RANGE**

**[1]** ANTIGUA AND BARBUDA
**[1]** BRUNEI DARUSSALAM
**[1]** COOK ISLANDS
**[1]** FALKLAND ISLANDS (MALVINAS)
**[1]** GIBRALTAR
**[1]** JAMAICA
**[1]** MALI
**[1]** MARTINIQUE
**[2]** NEW CALEDONIA
**[1]** NIGER
**[1]** SAINT VINCENT AND THE GRENADINES
**[1]** SEYCHELLES
**[1]** SVALBARD AND JAN MAYEN
**[1]** UNITED STATES
**[1]** VIRGIN ISLANDS, U.S.
**[1]** AUSTRALIA
**[2]** CAYMAN ISLANDS
**[1]** DJIBOUTI
**[1]** GAMBIA
**[1]** GUADELOUPE
**[1]** KIRIBATI
**[1]** MARSHALL ISLANDS
**[1]** MICRONESIA, FEDERATED STATES OF
**[1]** NEW ZEALAND
**[1]** NIGERIA
**[1]** SENEGAL
**[2]** SOUTH AFRICA
**[1]** THAILAND
**[1]** VANUATU
**[1]** ZAMBIA

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**Summary:** This compilation of information sources can be sorted on keywords for example: Baits & Lures, Non Target Species, Eradication, Monitoring, Risk Assessment, Weeds, Herbicides etc. This compilation is at present in Excel format, this will be web-enabled as a searchable database shortly. This version of the database has been developed by the IUCN SSC ISSG as part of an Overseas Territories Environmental Programme funded project XOT603 in partnership with the Cayman Islands Government - Department of Environment. The compilation is a work under progress, the ISSG will manage, maintain and enhance the database with current and newly published information, reports, journal articles etc.
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