

## **XCat Series Race - August 21-23, 2015**

### **Impact on migratory birds and endangered species, Curlew Island.**

This survey was organised by Robert Westerman in consultation with Birdlife Southern Queensland and Birds Queensland

#### **Summary**

This is not an ideal activity to conduct near an ecological sensitive site. It has the potential to have a high impact on residing species.

In this instance the impact appeared to be minimal on migratory species but did impact on an endangered local species.

- The race was conducted in August when very low high tides prevail. Large areas of the sandbank were still exposed at high tide so the Eastern Curlews and Double-banded Plovers had no need to use the higher and more exposed parts of the island as a roost.
- Only one summer migrant species, the Eastern Curlew, is present in August. They arrive on the Gold Coast during this month and are in an exhausted state due to their long non-stop migration. In this instance the birds were able to roost in area sheltered away from the impacts of the race.
- This year the endangered Beach Stone Curlew bred on the eastern side of the island. The parents abandoned their young during the race but did return on the Monday following the race. This was a critical time for the juvenile birds as one was injured.

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# *The XCat Race Series*

## *Conducted on the Gold Coast Broadwater from August 21-23, 2015*

### **Introduction**

The XCat series for high performance catamarans was conducted on the Gold Coast Broadwater from Friday August 21 to Sunday August 23. Some of the activities were programmed directly beside Curlew Island. The activities were programmed in the afternoon near high tide time. A series of practice races were run near Curlew Island on the Friday. The pole start activities were directly beside Curlew Island on Saturday and the main race was run in the vicinity of the Seaway on the Sunday. Spectator boat activity near Curlew Island was light on Friday and Saturday but heavy on Sunday. The main disturbance factors were the boat noises on Saturday and the number of people coming ashore on the island or anchoring near it on Sunday. An exclusion zone to include Curlew Island, proposed for the race did not appear to eventuate.

Due to the timing of the race and prevailing conditions at the time, the effects on local birds and migratory birds was minimal however there was an issue with one significant local endangered species - the Beach Stone Curlew. The race was not planned with environmental considerations in mind so this result was due to good fortune. In different circumstance the outcome may have been very different. This race coincided with very low tides and was held at a time when only one group of summer migratory birds was present.



Eastern Curlew roost area during race series

Beach Stone Curlew Camp

Friday and Saturday XCat activity zone





Most local common species such as Pelicans and Silver Gulls have constant interaction with man and permit a close approach. They do not appear to be disturbed by human activities so long as their food reserves are maintained. Pelicans, Silver Gulls and Crested Terns remained on the southern roost of the island while the race activities took place. Even a pair of Ospreys which have nested on a pylon in the middle of the Seaway remained on their nest while the race took place around them. The Broadwater is very quiet on most days but extremely busy at certain times. If high activity took place constantly, for a long period of time, constant observation may be required to determine if harm is occurring to common species.

### **Considerations for the XCat Race and similar events.**

The winter months are likely to be a good time to hold this type of event. Day time spring tides are very low, particularly in August. This gives the birds plenty of room to roost at high tide and avoid human activities. Once high tide heights go beyond 1.6 metres, roosting space on the island becomes restricted and roosting birds only have the option to move from one end of the island to the other or leave the island if they are disturbed.

Most migratory birds are absent from the Broadwater at this time. The Double-banded Plover from New Zealand is present at this time but this bird tends to keep to the western side of the island. If the Beach Stone Curlew is present, the place where they are camping deserves special care and protection. The Beach Stone Curlews camped this year directly beside where race activities were programmed. The birds were disturbed by the event.

Summer migratory birds begin arriving in August and depart, depending on species and prevailing weather conditions, during March and April. The Eastern Curlew arrives first in August and is followed by Bar-tailed Godwits and Whimbrels in September.

From my experience of frequently observing the island I would suggest the main factors to consider for future events of this kind would be:

1. Tide heights
2. Likely presence of threatened birds and methods to ensure their protection.
3. Boat presence in sensitive areas.
4. Visitation of people to sensitive areas.



*Pelicans roosting on southern end of Curlew Island.*

Disturbance factors on the Broadwater vary greatly. Usually the Broadwater is very quiet during most week-days and at these times the birds thrive. However on many weekends, holiday periods and during major water events, when the waterways are extremely busy and people and dogs roam on the island, the birds suffer severe disturbance.

The Curlew Island roost does not cope well with king tides. Once tides go beyond 1.6 metres the birds have very limited areas in which to roost and the roost is subject to boat wash from vessels travelling in the main channel.

Disruption factors are such that if these conditions were repeated on a continuous basis, the survival of the birds at this location could be a major concern.

### **Migratory Birds present during the race.**

At the time of this race only one summer migrant species– the Eastern Curlew was seen. Double-banded Plovers were sighted on the Wednesday following the race.

39 Eastern Curlews were present during the race.

At low tide Eastern Curlews birds spread out as individuals on all parts of the sandbank. As the tide rises they gather into a tight flock. These birds are very wary. An approach closer than 150 metre can only be achieved with great patience. The typical response of these birds is for them to first turn their backs towards you and move more quickly. Once the sentry bird gives one call the entire flock moves.

At the time of the race the high tides were very low and there was no need for the birds to move to the higher parts of the island to roost. They gathered together on the western side of the island and did not appear to be disturbed by the activities taking place on the eastern side of the island. However during the race event they did move in response to people walking along the western side of the island. In the days following the race they consistently returned to this location.

If a tide is 1.2 metres or below a large area of the western sandbanks are exposed. At 1.5 metres a narrow beach remains on the western side of the island. When tides are 1.6 or above, only the sandy areas at each end of the island remain exposed and are suitable as roosting areas,

*Eastern Curlew in foreground. Australian Pelicans in background*







*Tide at 1.5 Metres*



## Beach Stone Curlew

The Beach Stone Curlew is a spectacular local shorebird. They are a threatened specie. It is likely that no more than a dozen of these birds exist in SE Queensland. Each individual is valuable. Their main diet on the Gold Coast appears to be crabs. They camp under shrubs immediately adjacent to a sandy shoreline. Their environments needs to be free from disturbance by people, dogs, vermin and cats. Their feeding areas should be nearby. Curlew Island is an ideal environment for these birds providing it is properly protected.

During the winter of 2015 they camped and bred in a bay on the eastern side of Curlew Island. A pair have been present from May till now. At their camp site there is an abundant supply of small crabs directly in front of them at low tide. There are also many crab burrows in the small sand dune beside their camp.

During one visit in May I witnessed what appeared to be one of their chicks being taken by a Whistling Kite. Visits during July and August confirmed they had raised two young.

During the visit on Thursday August 21, two adult birds and two juvenile birds were sighted at their camp. One juvenile had a severe entanglement of fishing line around its right leg and was limping.

On Friday only the two juveniles were seen and on Saturday and Sunday there was one juvenile.

On the Sunday three boats containing 11 people were anchored at the bird's camp. One juvenile was located at the southern end of the island that day. On Monday and Wednesday four birds were found at various locations on the island. Only the injured bird was located at the bird's camp. By now it was also trailing a stick.

Late on Thursday 27 the injured bird was successfully captured, freed of the fishing line entanglement and released.

The Beach Stone Curlews were disturbed by the race and promises to restrict access to the island did not eventuate. It is hoped that the birds will settle back into their routine but it is unlikely they will remain here if constantly disturbed by human activities. The very least that could be done would be to erect information signs and restrict access to the vicinity of their camp.







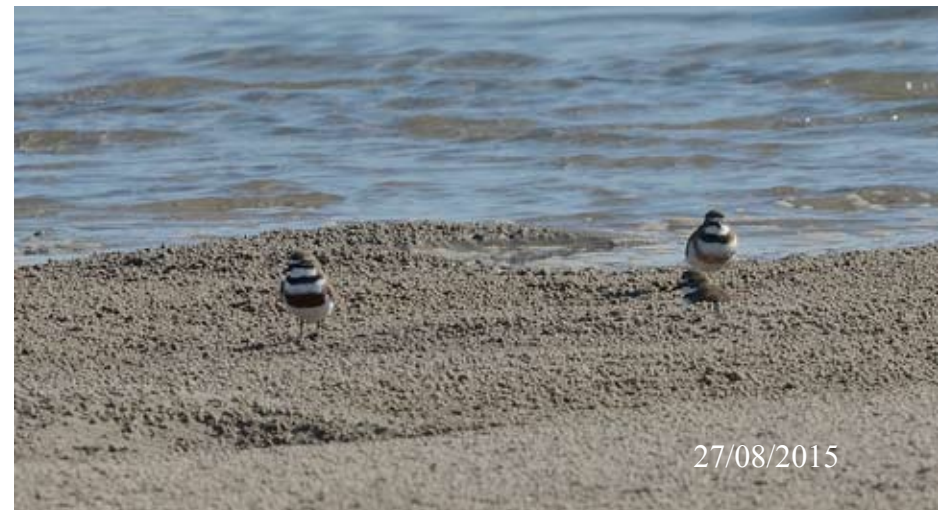
### **Pied Oystercatchers**

Pied Oystercatchers are currently nesting at the southern and northern ends of the island.



*Beach Stone Curlew feeding directly in front of their camping area*

*Double-banded Plovers in breeding plumage*





## About Curlew Island

Curlew Island is the unofficial name for the sandy island directly south of Wavebreak Island. It is the highest point of the large sandbanks south of Wavebreak Island. These sandbanks are also unnamed. These sandbanks are the largest in SE Qld outside of Moreton Bay.

For those who have the ability to see and appreciated what is found on Curlew Island it is a wonderland. For the uninformed it is merely sand in the middle of the Broadwater. Its values are well known to certain sectors of the scientific community but these values are not known to the general public. Many scientific studies have confirmed its ecological significance.

The island is now several hectares in size, is permanently above high tide, is well vegetated and supports very valuable wildlife. Most shorebirds are unable to swim and a roost is a high area where these birds gather at high tide to remain dry. Curlew Island has been an important shorebird roost and food source for these birds ever since the Gold Coast Seaway was constructed. For most of this time it was a raised sandbank but it is now a permanent island and growing in size.



Though this island is shown as permanent coastline on Queensland Globe (Dept of natural Resources official map) it does not have a land title under the Lands Act or a recognised conservation status. This has led to considerable difficulties in obtaining proper protection and management of its wild life qualities. The wildlife here is constantly harassed by thoughtless actions of people who bring dogs on to the island, walk through or near the roosting birds, leave trash including fishing line behind or buzz the island with their boats. There is now a large accumulation of trash which is both unsightly and dangerous to the birds which use the island. This rubbish also serves as collection points for water which has the potential to attract vermin such as mosquitoes, rats and snakes.

## **Broadwater Shorebirds**

The number and range of species found here is less than in former times but this is also true of most locations in Queensland. This should add incentive to care for the bio-diversity which we still have on the Gold Coast and attempt to diminish further decline.

Many local shorebirds such as Pelicans, Little Black Cormorants, Silver Gulls and Crested Terns visit the island in large numbers. The island has a permanent population of Pied Oystercatchers. Ospreys, Brahminy Kites, Whistling Kites and White-bellied Sea-Eagles are frequently seen here. Sometimes these species are all seen in the one day. Rare local birds such as Caspian Terns, Gull-billed Terns and Beach Stone Curlews also reside here. Other birds such as Masked Lapwings, White-faced Herons, Intermediate Egrets, Pied Cormorants, Black Swans and Pied Stilts are other frequent visitors.

In the past six months Pied Oystercatches and the rare Beach Stone Curlew have bred here. This breeding event by the Beach Stone Curlew (not to be confused with the Bush Stone Curlew) is of considerable significance as their numbers are very low, perhaps no more than a dozen in SE Queensland.

Of special significance are the migratory shorebirds which use the island.

These summer migrants live in Australia during the summer months and migrate to Asian lands near the Arctic during our winter for their breeding season. The Eastern Curlew is the first to return. It arrives on the Gold Coast during August and other migrants such as Bar-tailed Godwits and Whimbrels follow in September. Little Terns and common Terns make episodic visits from October to April.

Eastern Curlews, Bar-tailed Godwits and Whimbrels are permanent residents and are always present from late September till March. Double-banded Plovers are winter migrants from New Zealand and are present from May to August.

These are all record breakers. The Eastern Curlew is the world's largest shorebird, the Bar-tailed Godwit does the longest non-stop journey of any creature on earth (10 000 klms) and the sparrow sized Double-banded Plover is the only bird which does an east-west migration over a large expanse of ocean. Other passage birds include Red-necked Stints, Curlew Sandpipers, Great Knots, Golden Plovers and Grey-tailed Tattlers.

Migratory birds use the exposed sand areas at the northern and southern ends of the island as high tide roosts and feed on the surrounding sand banks from low tide up to half tide. The surrounding sand banks are rich in small crabs and crustaceans. This is the food source for shorebirds and during low tide they spread out over the entire sand bank system. From half tide onwards only the banks near Curlew Island remain exposed and then the migratory form tight groups near the island as they begin to roost.

## **Shorebird Needs**

Shorebirds have three basic requirements: *1. Productive feeding areas. 2. A high tide roost. 3. A safe environment (this includes freedom from predators and freedom from disturbance, particularly human disturbance).*

1. Curlew Island has extensive feeding areas on the sand banks which surround it. These banks are rich in small crabs (eg soldier crabs) and crustaceans (eg salt water yabbies).
2. Curlew Island is one of four roosts in the Broadwater. There is a roost near the mouth of the North Coomera River. There is a roost near Currigee and another roost at Jumpinpin. These last three roosts are in the Moreton Bay Marine Park and management policies can be used to protect them.
3. Curlew Island is an ideal roost except it is located in a busy area. It has good high tide roosts at either end of the island and unlike the other roosts it is separated from the mainland so it does not have predators such as wild cats, wild dogs, rats and snakes. It does however suffer from human disturbance from



people walking near or through flocks of birds or releasing dogs on the island. This type of disturbance is quite manageable through wildlife management strategies. The roost fails in January during king tides due to boat wash from large vessels using the nearby boat channel. Again this could be alleviated by modifying the roost.

### **Protection of Curlew Island.**

The health of the Broadwater is important for the preservation of even common species which many people enjoy. The sandbanks of the Broadwater are far less extensive than in former times. Long term residents are able to recall extensive sandbanks and birdlife upstream of the present Gold Coast Bridge. Today that environment is completely man altered and very little birdlife of any significance is now found here.

Care of Curlew Island and its associated sandbanks is essential to maintain the present health of the Gold Coast Broadwater. Common local birds, rare local birds and migratory birds depend on it. The presence of birdlife is an indicator of other life which is present. The Broadwater is an important recreational area and most people enjoy their recreation when surrounded by abundant natural life.

Most development proposals have very little understanding of the bio-diversity which is found here. Much of this bio-diversity is not immediately obvious to the casual observer so for the uninformed it is possible to assume the Gold Coast Broadwater is little more than a shallow river estuary filled with sand which hinders boat navigation.

This island meets the criteria for important habitat under the Commonwealth EPBC Act. Most of the island and surrounding banks were excluded from development for the proposed Wavebreak Island project. The proponent of the Wavebreak Island development suggested that the area should be a marine park. There is no need for a private concern to make it a marine park as this may simply be achieved by Government action as the area is government land.

No level of government or any of its utilities have given Curlew Island their attention or implemented any strategies to care for its wildlife. This includes the Queensland Government, Gold Coast City Council and the Gold Coast Waterways Authority. If no authority is willing to accept responsibility for its care, this natural wildlife asset may be lost through sheer neglect.

There are three basic options to achieve protection for Curlew Island and its surrounding sand banks.

1. Designate the area as a Marine Park. This could be achieved by adding the area to the nearby Moreton Bay Marine Park.
2. Designate the area as a National Park.
3. Designate the area as a Regional Park. The Qld Nature Conservation Act allows Regional Parks to be administered by a trustee.

If the Gold Coast City Council or the Gold Coast Waterways Authority are willing to become a trustee for the area, protection for the area could be quickly achieved by this designation.

*Robert Westerman*

**30/08/2015**

## Birds of Curlew Island:

Compiled from 10 bird counts by Robert Westerman and others between May 23, 2012 and December 18, 2013.

| <b>Migratory Shorebirds</b>   | <b>Presence:</b>                                     | <b>Comment:</b>  |
|-------------------------------|--|--|
| Eastern Curlew                | 35-65 Always present each day during spring-summer   | Favour western side of island. Principal feeding area near roost.      |
| Bar-tailed Godwit             | 34-135 Always present daily during spring-summer     | Congregate on roost at H tide but range widely over Broadwater         |
| Whimbrel                      | 42-84 Always present each day during spring-summer   | Congregate on roost at H tide but range widely over Broadwater         |
| Double-banded Plover          | 68-84 Frequent visitors during winter                | Prefer western side of southern roost                                  |
| Grey Plover                   | Rare visitor during Spring                           | Observed on southern roost   |
| Golden Plover                 | Occasional visitor during Spring                     | Observed on southern roost   |
| Greater Sand Plover           | Rare visitor during summer                           | Observed feeding with Eastern Curlews at mid-tide                      |
| Red-necked Stint              | Occasional visitor during spring-summer              | Prefer southern roost area   |
| Great Knot                    | Rare visitor during summer                           | Observed feeding with Eastern Curlews at mid-tide                      |
| Grey-tailed Tattler           | Occasional visitor during spring-summer              | Observed feeding with Eastern Curlews at mid-tide                      |
| Curlew Sandpiper              | Occasional visitor during spring-summer              | Observed on western shoreline of island at mid-tide.                   |
| <b>Migratory Terns:</b>       |  |  |
| Common Tern                   | 4-68 Observed most days during spring-summer         | Prefer eastern side of southern roost                                  |
| Little Tern                   | Occasional flocks during spring-summer               | Prefer eastern side of southern roost                                  |
| Caspian Tern                  | Present in small numbers all days, all year          | Roosts with other terns prefers western side of island                 |
| <b>Australian Terns:</b>      |  |  |
| Crested Terns                 | Present in large numbers (+100) all year             | Widely distributed on Broadwater. Prefers eastern side of roost areas. |
| Gull-billed Tern              | Present in small numbers all year, more in winter    | Prefer western side of island  |
| <b>Pelagic</b>                |  |  |
| Australian Gannet             | Present during migration                             | Juvenile gannets frequent visitors to Broadwater                       |
| Short-tailed Shearwater       | Present during migration                             | Observed on waters near island.  |
| <b>Australian Shorebirds:</b> |  |  |
| Pied Oystercatchers           | Present in small numbers all days, all year          | Found on all parts of island and banks                                 |
| Masked Lapwing                | Present in small numbers summer, plentiful in winter | Widely distributed throughout Broadwater                               |
| Red-capped Plover             | Frequent visitor (2-20) all year, more in winter.    | Prefer southern end of island.   |
| Black-winged Stilt            | Occasional visitor                                   | Observed in channel between the major sandbanks.                       |
| Beach Stone Curlew            | Occasional visitor                                   | Rare bird - has attempted to breed on island.                          |



|                           |   |   |
|---------------------------|---|---|
| Silver Gull               | Very common all year                        | Widely distributed throughout Broadwater              |
| Australian Pelican        | Very common all year                        | Widely distributed throughout Broadwater              |
| <b>Waterbirds</b>         |   |   |
| White-faced Heron         | Solitary frequent visitor                   | Widely distributed throughout Broadwater              |
| Reef Heron                | Rare visitor                                | Observed near southern roost                          |
| Striated Heron            | Occasional visitor                          | Observed near channel area between major sand banks.  |
| Little Egret              | Occasional visitor                          | Observed near water edge of banks at low to mid tide. |
| Intermediate Egret        | Frequent visitor                            | Observed near water edge of banks at low to mid tide. |
| Great Egret               | Occasional visitor                          | Observed near water edge of banks at low to mid tide. |
| Royal Spoonbill           | Occasional visitor                          | Observed near water edge of banks at low to mid tide. |
| Little Pied Cormorant     | Frequent visitor                            | Observed in waters around island                      |
| Pied Cormorant            | Solitary frequent visitor                   | Makes frequent use of Central Roost.                  |
| Little Black Cormorant    | Common resident of Broadwater               | Up to 400 frequently roost on any part of island.     |
| <b>Raptors:</b>           |   |   |
| Eastern Osprey            | Frequent visitor                            | Perches in trees near Central Roost.                  |
| Brahminy Kite             | Frequent visitor                            | Scavengers on tidal banks.                            |
| Whistling Kite            | Frequent visitor                            | Observed in flight over island.                       |
| White-bellied Sea-Eagle   | Frequent visitor                            | Observed in flight over island.                       |
| <b>Other Birds:</b>       |   |   |
| Torresian Crow            | Frequent visitor. Very common in winter.    | Observed in tidal area during winter.                 |
| Magpie                    | Occasional visitor                          | Presence confined to island                           |
| Grey Butcherbird          | Occasional visitor                          | Roosts in trees on island.                            |
| Pied Butcherbird          | Occasional visitor                          | Roosts in trees on island.                            |
| Black-faced Cuckoo Shrike | Occasional visitor                          | Roosts in trees on island                             |
| Australian Pipit          | Frequently observed                         | Observed gathering nesting material during 2013       |
| Golden-headed Cisticola   | Pair resident during 2013                   | Observed on southern end of island                    |
| Noisy Miner               | Frequent visitor                            | Observed in trees on island.                          |
| Rainbow Lorikeet          | Frequent visitor                            | Observed in trees on island.                          |
| Scaly-breasted Lorikeet   | Occasional visitor                          | Observed in trees on island.                          |
| Welcome Swallow           | Present all year, sometime in large numbers | Observed feeding in flight above island.              |