

= Cyclone Kathy =

Severe Tropical Cyclone Kathy was a powerful tropical cyclone that devastated the Sir Edward Pellew Group of Islands in March 1984 . Originating from a tropical low off the southern coast of Papua New Guinea . Tracking westward , the system attained gale @-@ force winds by 18 March before striking the Cape York Peninsula . After crossing the area , Kathy entered the Gulf of Carpentaria where environmental conditions favoured significant development . On 22 March , the storm attained its peak intensity as a Category 5 severe tropical cyclone (Australian tropical cyclone intensity scale) with ten @-@ minute sustained winds of 205 km / h (125 mph) . By this time , the storm had been tracking towards the southwest and struck the Sir Edward Pellew Group of Islands later on 22 March before moving over the Australian mainland as a slightly weaker system . Once over land , Kathy rapidly degraded , losing gale @-@ force winds within 24 hours ; the storm dissipated over the Northern Territory on 24 March .

Moving through the Pellew Islands as a powerful cyclone , Kathy generated a maximum storm surge of 4 @. @ 2 metres (14 ft) and winds exceeding 232 km / h (144 mph) . Offshore , 20 vessels were affected , one of which sank and resulted in the death of its captain . In mainland Australia , the system struck a relatively sparsely populated area , with only Borroloola being significantly impacted by the cyclone . Additionally , mangroves at along the McArthur River sustained substantial damage . Overall , losses from the storm were placed at A \$ 12 million (A \$ 30 @. @ 5 million 2011 AUD ; US \$ 24 @. @ 1 million 2011 USD) . Following its usage , the name Kathy was retired and will never be used again to name an Australian cyclone .

= = Meteorological history = =

On 16 March 1984 , the Bureau of Meteorology began monitoring a tropical low off the southern coast of Papua New Guinea for possible development into a tropical cyclone . Over the following day , the system quickly developed and attained gale @-@ force winds as it neared the Cape York Peninsula . Attaining a pressure of 990 hPa (mbar ; 29 @. @ 23 inHg) , the weak system made landfall just north of Weipa , Queensland on 19 March before losing strength . Though already considered a tropical cyclone for two days by the Bureau , the Joint Typhoon Warning Center (JTWC) issued their first advisory on the system just prior to its landfall ; however , they considered it to be a tropical depression rather than a storm . After roughly 12 hours over land , a weakened Kathy emerged over the warm waters of the Gulf of Carpentaria on 20 March . Once over water , the JTWC classified the system as a tropical storm . Turning southwestward , the storm entered a region favoring significant development and soon began a period of rapid intensification .

Intensification took place through 22 March as convection deepened around Kathy 's centre and a well @-@ defined eye formed . The system reached its peak strength as a Category 5 severe tropical cyclone on the Australian tropical cyclone intensity scale with ten @-@ minute sustained winds of 205 km / h (125 mph) . Operational analysis of the storm indicated a minimum pressure of 920 hPa (mbar ; 27 @. @ 17 inHg) ; however , a reassessment in 2009 concluded that Kathy 's pressure had been slightly lower , bottoming out at 916 hPa (mbar ; 27 @. @ 05 inHg) . Additionally , the JTWC assessed the system to have been slightly stronger , estimating peak one @-@ minute sustained winds at 250 km / h (155 mph) . At this time , the storm was estimated to have a Dvorak technique rating of 7 @. @ 0 , equivalent to a Category 5 on the Saffir ? Simpson Hurricane Scale ;

As Cyclone Kathy neared the Australia coastline later on 22 March , it began to weaken as it interacted with land . Radar imagery depicted the system as having an eye 10 @. @ 8 km (6 @. @ 7 mi) in diameter . Roughly 5 hours after peaking , the storm passed directly over the Sir Edward Pellew Group of Islands , resulting in a degrading structure . Near midnight , the system weakened to a Category 4 cyclone and made landfall in a remote region near Borroloola . Based on a wind gust to sustained ratio of 1 @. @ 4 , Kathy was estimated to have moved onshore with winds between 165 and 185 km / h (105 and 115 mph) . In the hours after landfall , Kathy rapid weakened , no longer retaining gale @-@ force winds once 200 km (120 mi) away from the Gulf on 23 March . Later that day , the system turned south @-@ westward and persisted for another 24

hours before dissipating .

= = Impact = =

In Far North Queensland , Kathy brought moderate rainfall and strong winds to much of the region . No measurements from the centre of the storm were made , although a wind gust of 60 km / h (37 mph) was recorded in Batavia Downs , Queensland , about 55 km (34 mi) south @-@ southeast of the cyclone . Between 18 and 21 March , a total of 126 @.@ 7 mm (4 @.@ 99 in) of rain fell near Batavia Downs . Due to the relatively low intensity of the storm , damage was minimal and mainly confined to trees .

Striking the Sir Edward Pellew Group of Islands as a high @-@ end Category 4 cyclone , Kathy wrought significant damage in the region . A storm surge of 4 @.@ 2 m (14 ft) struck Vanderlin Island , destroying much of the nesting ground for sea turtles . Winds were recorded up to 232 km / h (144 mph) before the station 's anemometer failed . Several camps across the islands were destroyed . Offshore , 20 vessels were caught in the storm , one of which sank and three others ran aground . One person perished on board the ship that sank during the storm . Losses sustained by the ships were placed at A \$ 5 million (A \$ 12 @.@ 7 million 2011 AUD ; US \$ 10 million 2011 USD) .

Though a powerful storm , only light to moderate rains fell along the cyclone 's path with totals generally less than 100 mm (3 @.@ 9 in) . The remnants , however , triggered thunderstorms near Tennant Creek that produced 325 mm (12 @.@ 8 in) of rain in 24 hours . Reports indicate that several sea turtles and dugongs were washed up to 8 km (5 @.@ 0 mi) inland by Kathy 's surge . The only population center significantly affected by the storm was Borroloola , where moderate to severe damage took place . At least one home was destroyed and many more were damaged in the town . Along the mouth of the McArthur River , near where Kathy struck the mainland , the combination of severe winds and storm surge killed 80 % (\pm 20 %) of the Rhizophoraceae mangrove trees in the region . Along the entire length of the river , 45 % (\pm 15 @.@ 3 %) of the Rhizophoraceae , Bruguiera and Ceriops as well as 18 @.@ 5 % (\pm 11 @.@ 4 %) of the Exoecaria agallocha , Lumnitzera racemosa and Avicennia marina perished . In all , losses from the storm were placed at A \$ 12 , million (A \$ 30 @.@ 5 million 2011 AUD ; US \$ 24 @.@ 1 million 2011 USD) .

In the wake of the storm , Australian Prime Minister Bob Hawke promised residents of Borroloola that they would receive all possible help from the government . About 400 people in the town were left homeless by Cyclone Kathy . By 25 March , a Royal Australian Air Force aircraft was sent to the region carrying emergency supplies for sheltering displaced persons . Two patrol boats from the Royal Australian Navy were also sent to assist in relief efforts . One brought fuel and medical supplies and the other assisted trawlers set adrift or grounded by the storm . Following its usage , the name Kathy was retired from Brisbane 's list of cyclone names and will never be used again .