

= Typhoon Amy (1951) =

Typhoon Amy was an intense and deadly tropical cyclone that struck areas of the central Philippines in December 1951 . Impacting the archipelago during the 1951 eruption of Mount Hibok-Hibok , Amy exacerbated the effects of the volcano , greatly increasing the number of resulting deaths . The fifteenth named storm and fourteenth typhoon within the western Pacific Ocean that year , Amy developed from an area of low pressure near the Kwajalein Atoll on December 3 . Tracking in a general westward direction , the storm quickly intensified to reach typhoon intensity the next day . However , the typhoon 's asymmetry resulted in a fluctuation of intensity over the following few days . Afterwards , Amy intensified to reach its peak intensity with maximum sustained winds of 220 km / h (140 mph) and a minimum barometric pressure of 950 mbar (hPa ; 28 . 05 inHg) on December 8 . Over the ensuing two days , Amy moved over several islands in the central Philippines before emerging in the South China Sea on December 11 as the equivalent of a minimal typhoon . Shortly after , the tropical cyclone executed a tight anticyclonic loop while oscillating in strength several times before eventually weakening and dissipating on December 17 , just east of Vietnam .

Amy was considered one of the worst typhoons to strike the Philippines on record . Making its initial landfall along with the concurrent eruption of Mount Hibok-Hibok on Camiguin , the typhoon disrupted volcanic relief operations and forced the displacement of victims already displaced by the volcano . Cebu City suffered the worst impacts of Amy ? most of the city 's buildings were heavily damaged , and 29 people died in the city . Strong winds and rainfall in the city associated with Amy also set records which still remain unbroken today . Damage there was estimated at 560 million Philippine pesos . Along the east coast of Leyte , where Amy initially struck , ninety percent of homes were destroyed , and a large swath of coconut plantations were wiped out . In Panay , located on the western side of the Philippines , at least a thousand homes were destroyed in 41 towns . Overall , Amy caused \$ 30 million in damage , and at least 556 fatalities , though the final death toll may have been as high as 991 , making the typhoon one of the deadliest in modern Philippine history . An additional 50 000 people were displaced .

= = Meteorological history = =

The origins of Typhoon Amy can be traced back to a low pressure area first detected over Kwajalein at 0500 UTC on November 29 . Tracking westward , the Fleet Weather Center in Guam began to monitor vorticity for potential development , assigning the numeric designation 11122 to the tropical system . Late on December 2 , a routine weather reconnaissance flight unexpectedly intercepted the disturbance and detected unusually strong westerly winds , a characteristic typically indicative of a tropical cyclone . As such , the flight , named Vulture George , was rerouted to investigate the area . After finding conclusive evidence of a closed low pressure area , the Fleet Weather Center in Guam classified the disturbance as a tropical storm with winds of 100 km / h (60 mph) . At the time , Amy had two separate centers of circulation , resulting in an asymmetrical wind field .

Following tropical cyclogenesis , the fast moving tropical cyclone quickly intensified , reaching the equivalent of a Category 1 on the modern day Saffir-Simpson hurricane wind scale . Between December 4 and 5 , however , Amy briefly weakened back to tropical storm intensity before restrengthening . Steady intensification followed afterwards , with the typhoon reaching the equivalent of a Category 3 hurricane by 0000 UTC on December 6 . By this time , the storm had slowed in forward speed . Later that day , the two , formerly separate circulation centers merged , resulting in an eye spanning 26 km (16 mi) in diameter . At 1200 UTC on December 8 , Amy reached its peak intensity with winds of 220 km / h (140 mph) and a minimum barometric pressure of 950 mbar (hPa ; 28 . 05 inHg) , which would classify it as a modern day Category 4 typhoon . At the same time , the tropical cyclone began to track slightly southwestward . At 0600 UTC the following day , Amy made its first landfall on southern Samar with an intensity equivalent of a Category 2 typhoon . Over the next two days , the typhoon weakened and moved over several

islands in the Philippines including Leyte , Cebu , and Panay before emerging into the South China Sea on December 11 .

In the South of China Sea on December 11 , Amy quickly slowed in forward motion and began to execute a cyclonic loop . Late that day , the typhoon strengthened back to Category 2 intensity , and as such concurrently attained a tertiary peak intensity with winds of 160 km / h (100 mph) and a minimum barometric pressure of 968 mbar (hPa ; 28 @. @ 59 inHg) . Late on December 13 , Amy weakened back to a Category 1 typhoon for a transient period of time before restrengthening and reaching a quaternary peak intensity as a Category 3 typhoon with maximum sustained winds of 115 mph (185 km / h) . Afterwards , the typhoon began to weaken , and at 0900 UTC on December 17 , the Fleet Weather Center in Guam issued their last bulletin on the tropical cyclone . Upon the issuance of the last advisory , Amy set records for most typhoon bulletins issued at 58 , and most reconnaissance fixes at 25 . However , Amy continued to persist through the next day before degenerating into a remnant low @-@ pressure area late on December 18 . The following day , the associated remnants of Amy dissipated east of Vietnam .

= = Impact and aftermath = =

Beginning on September 1 , 1948 , the then @-@ active volcano Mount Hibok @-@ Hibok on Camiguin Island in the Philippines began to release lava in a series of eruption events which continued for the ensuing three years . On December 4 , 1951 , a large , Peléan eruption event later rated between a 2 and 3 on the Volcanic Explosivity Index , sending pyroclastic flows and lahars down the northeast flank of the volcano . The resultant ash flows alone killed an estimated 500 people on the island , making it one of the deadliest volcanic eruption events in recorded history . As the typhoon approached the archipelago , relief agencies were forced to divert aid operations to victims of the recent eruption , slowing the recovery process .

Upon making landfall on south Samar on December 10 , Hibok @-@ Hibok erupted six times in rapid succession , worsening the effects of both the typhoon and the volcano . Amy had also made landfall on an area impacted by a second typhoon three weeks prior . Strong winds displaced and destroyed residences and uprooted trees , while torrential rainfall caused rivers to overflow , resulting in the flooding of sugarcane fields and the washing away of bridges . Radio communications to and between most of the central Philippine islands were disrupted .

Cebu was one of the worst impacted cities . At the local airport , an anemometer recorded sustained winds of 160 km / h (100 mph) early on December 10 , which remains a record for the city . Rainfall peaked at 195 @. @ 3 mm (7 @. @ 69 in) ; at the time this made the typhoon the wettest tropical cyclone in Cebu history . All buildings made of light construction materials were at least partially damaged , with many large structures sustaining roof or other damage . At least 29 people were killed in the city , including the drownings of three due to the resultant flooding . The typhoon 's effects caused the cessation of the city 's power supply . Damage in Cebu totaled 560 million Philippine pesos . At least a hundred other people in Cebu City were displaced . Offshore , 28 ships capsized due to winds caused by Amy , including 7 inter @-@ island vessels . This set a new record for vessels sunk by a typhoon in Cebu , and held until Typhoon Mike sunk 88 ships in 1990 .

On Samar , where Amy first struck , reports indicated that 27 people died , despite initial reports that stated that there were no fatalities . In Iloilo City on Visayas , two people were killed and seventeen others were injured . Property damage in Bacolod , Negros was estimated at \$ 250 @, @ 000 , and 52 people died , with an additional 2 @, @ 250 persons rendered homeless . Elsewhere on Negros , 30 percent of the island 's vital sugar crop was destroyed . On the east coast of Leyte , the typhoon was considered the worst in living memory , and ninety percent of homes there were destroyed . In Negros Oriental , schoolhouses in Canlaon , Vallehermoso , Negros Oriental , and Guihulngan were blown down . An aerial survey mission estimated that at least 30 sq mi (78 km²) of coconut plantations were devastated ; other coconut plantations throughout the Philippines also suffered considerable damage . Copra crops also suffered sizeable losses , though production was expected to remain at forecast levels . Tacloban 's San Jose Airfield was severely damaged by the

strong storm surge from Amy . In the Tacloban and Surigao Strait area , an estimated 146 people were killed . In the Leytenian town of Abuyog , the mayor had announced that 176 people were killed in the town alone . Another 135 fatalities were confirmed in Sogod . More than 100 persons were injured by falling coconuts and other airborne debris . On Leyte alone , damage was estimated at \$ 8 million . The Red Cross estimated over a thousand homes in 41 towns on Panay were destroyed by the storm . More than 20 percent of crops and infrastructure were destroyed . Four people were killed on the island . Upon looping in the South China Sea , Amy brought torrential rainfall to areas of Manila , though no damage was reported .

Overall , Amy caused at least an estimated \$ 30 million in damage throughout the central Philippines . However , the total number of fatalities directly associated with the effects of the typhoon remain disputed , and may range anywhere from 569 to 991 , making Amy one of the deadliest typhoons to strike the island nation in recorded history . An additional 50 @, @ 000 people were rendered homeless by the storm . The typhoon was characterized by the Philippine weather bureau to be the worst typhoon to strike the Philippines in at least 70 years . In the aftermath of Amy , then @-@ president of the Philippines Elpidio Quirino declared a state of public calamity for eleven central Philippine provinces including the island of Camiguin , which was heavily affected by both the typhoon and Mount Hibok @-@ Hibok . On December 24 , the American Red Cross granted \$ 25 @, @ 000 to the Philippine Red Cross .