

= Typhoon Mamie ( 1985 ) =

Typhoon Mamie was the worst tropical cyclone to affect China in 26 years . Originating from an area of disturbed weather near the Philippines in mid @-@ August 1985 , the system gradually became better organized , and was upgraded into a tropical storm early on August 16 . It continued to deepen , and late on August 17 , Mamie attained typhoon intensity . Around this time , Typhoon Mamie reached its peak intensity of 120 km / h ( 75 mph ) , which it maintained for 12 hours . After making landfall in Shanghai , the storm steadily weakened . However , after turning north and crossing the Shanghai Peninsula and the Yellow Sea , Mamie made a second landfall near Yantai as a tropical storm . After turning northwest and re @-@ entering the Yellow Sea , Mamie moved ashore for the third and final time near Dairen . On August 21 , Mamie dissipated inland over northeastern China .

Due to both Mamie and Nelson , widespread flooding was reported across much of northern China , with 19 rivers overflowing . The typhoon forced around 1 @,@ 000 factories to temporarily close , and toppled approximately 6 @.@ 5 million trees . Moreover , about 8 @,@ 000 homes were flooded and 120 @,@ 000 houses received damage Nearly 1 million people were directly affected by the typhoon . The typhoon killed more than 120 @,@ 000 animals and sank more than 200 boats . Overall , 17 fatalities occurred and 165 were injured . Losses totaled \$ 172 million ( 1985 USD ) .

= = Meteorological history = =

Typhoon Mamie originated from the southwesterly monsoonal flow near the Philippines . The monsoon flow was situated near Tropical Storm Lee , which was situated east of Taiwan at that time . At 0000 UTC on August 14 , banding features were noted via satellite imagery . The system was first monitored by the Joint Typhoon Warning Center ( JTWC ) at 0600 UTC on August 14 ; the JTWC noted that the chances of significant development were poor . Throughout the day , the system became better organized while turning north and at 1800 UTC that day , the Japan Meteorological Agency ( JMA ) started watching the disturbance . Early on August 15 , the JTWC remarked that the storm had a " fair " chance at potential development . As such , Hurricane Hunter aircraft was requested . Following an increase in banding features and outflow , a Tropical Cyclone Formation Alert ( TCFA ) was issued by the JTWC that afternoon . Thereafter , the cyclone began to strengthen as interaction with Tropical Storm Lee diminished . At 2300 UTC on August 15 , the aircraft discovered a closed low @-@ level circulation , as well as tropical storm @-@ force winds . Based on this , both agencies designated the system as Tropical Storm Mamie early on August 16 .

On August 16 , the tropical storm began to turn northwest in response to the strengthening of a subtropical ridge north of Mamie and a westward @-@ moving mid @-@ latitude cyclone . At 0000 UTC on August 17 , the JTWC classified Mamie as a typhoon while the JMA reported winds of 105 km / h ( 65 mph ) , a severe tropical storm . Around midday , the JTWC estimated winds of 130 km / h ( 80 mph ) , equivalent to a Category 1 hurricane on the United States @-@ based Saffir @-@ Simpson Hurricane Wind Scale . However , the aforementioned ridge was not strong enough to prevent the storm from turning north @-@ northwest on August 17 . That evening , the JMA upgraded Mamie to typhoon status . Simultaneously , the JMA estimated peak winds of 120 km / h ( 75 mph ) , and a minimum barometric pressure of 975 mbar ( 28 @.@ 8 inHg ) . According to the JMA , the typhoon held on to peak intensity for 12 hours while moving onshore near Shanghai on August 18 . Mamie only gradually weakened overland , but according to the JMA , the storm 's winds had decreased to 105 km / h ( 65 mph ) midday on August 18 . Typhoon Mamie moved offshore at 0200 UTC on August 19 ; subsequently , the JTWC estimated winds of 95 km / h ( 60 mph ) while the JMA estimated winds of 95 km / h ( 60 mph ) . After crossing the Shanghai Peninsula , Mamie entered the Yellow Sea while turning north along the western periphery of a subtropical ridge , and at 0600 UTC , struck Yantai as a minimal tropical storm . Following a turn towards the northwest , Tropical Storm Mamie briefly emerged into the Yellow Sea before making a third and final landfall just west of Dairen at noon . At the time of landfall , both the JMA and the JTWC reported winds of 70 km / h ( 45 mph ) . Due to interaction with the mountainous terrain of

China , Mamie began to dissipate over land , and by 0000 UTC on August 20 , the JTWC ceased watching the cyclone . The JMA followed suit 42 hours later .

= = Preparations , impact , and aftermath = =

Roughly 24 hours prior to Mamie 's third landfall , all ships were warned in the port of Dalian to evacuate ; however , 152 ships stayed at the port . Shortly after making landfall , Mamie was considered the worst storm to affect northeastern China in 26 years . The nation was already inundated by significant flooding earlier in the summer of 1985 , especially from Typhoon Nelson .

After making landfall , Typhoon Mamie dropped 420 mm ( 17 in ) of rain in Liaoning , where the storm flooded 300 @, @ 000 ha ( 741 @, @ 315 acres ) of farmland . Due to a combination of Mamie and previous flooding , 19 rivers overflowed . The typhoon forced 1 @, @ 000 factories to temporarily close , and toppled about 6 @. @ 5 million trees . Over 8 @, @ 000 dwellings were flooded . More than 3 @, @ 000 residents were evacuated in the Jilin province . At least 36 @, @ 400 villagers necessitated rescue . Nearly 1 million individuals were directly affected by the typhoon . Elsewhere , in Yantai , the typhoon killed more than 120 @, @ 000 animals , damaged 120 @, @ 000 homes , and sank more than 200 boats . Waves up to 8 m ( 26 ft ) in height pounded the Bohai Bay shoreline , forcing more than 200 ships to be evacuated . Cables securing an oil rig were snapped . One person died while trying to fasten steel products on a ship . In all , 17 people perished and 165 were injured due to Mamie . Loses totaled \$ 172 million .

After the passage of Typhoon Mamie , more than 800 @, @ 000 civilians and 9 @, @ 000 soldiers were organized in order to protect reservoirs from flooding . By August 28 , 150 @, @ 000 civilians and 10 @, @ 000 soldiers were fighting against flooding along the Liao River on a daily basis . Additionally , local military forces were called in to assist relief workers . The government organized buses and boats to carry flood victims . Some schools were used as shelter while restaurants and hospitals sent food and medicine .