# Unit 3: General Mesoscale Phenomena

## Questions for Review

* Compare the observation needs of mesoscale analysis compared with synoptic scale analysis
* Describe the basic ingredients for and typical lifecycle of ordinary thunderstorms
* Compare and contrast tropical and mid-latitude squall lines
* Compare and contrast supercell, pulse, and multicellular thunderstorms
* List the potential weather hazards most likely associated with MCSs
* Describe the change in precipitation you might observe as a tropical squall line passes over you while moving from east to west.
* Describe the impact of vertical shear on the development and movement of MCSs
* List as many of the severe storm types of the north Australian monsoon as you can and at least one feature in the sounding profile that would alert you to potential severity.
* Compare and contrast tornadoes and waterspouts.
* Describe the formation mechanisms for non-supercell tornadoes
* What are morning glories and how do they typically form?
* Describe why and how sea-land breezes form.
* Describe why and how mountain-valley breezes form.
* What are some common ways for gravity waves to form in the atmosphere?
* Describe how mountain waves are generated.
* How does a mesoscale convective vortex develop?