5. SUMMARY AND SUGGESTION

5.1. Summary
From the experimental results of this study, 100% not responding organism at upper thermal limit experiment (hourly increase) for *Ophiomastix annulosa*, *Ophiarachna incrassata*, *Ophiocoma cf. dentata*, and *Fromia milleporella* was 36.5 °C and 37 °C, 37.2 °C, 40.5 °C, and 35.8 °C and 35.0 °C (respectively); at upper thermal limit (daily increase) for *Ophiomastix annulosa*, *Ophiarachna incrassata*, and *Fromia milleporella* was 35.0 °C, 34.0 °C, and 33.0 °C (respectively); at lower thermal limit (hourly decrease) for *Ophiomastix annulosa* was 12.8 °C; at lower salinity limit (hourly decrease) for *Ophiomastix annulosa* and *Ophiocoma cf. dentata* was 20.5 and 13. The thermal window for *Ophiomastix annulosa* (hourly experiment) was between 12.8-37.0 °C. The conclusion from the result are (1) it could be seen that intertidal species had wider range of temperature and salinity limit (on hourly increase temperature and hourly decrease salinity); (2) it could be assumed that these ophiuroids and asteroids species could acclimatize and survive to more rapid changing environment than slow changing environment; as long as the oxygen is available in sufficient amount. To conclude these experiments, the thermal limit for each species varies from each other, depending on where they live (intertidal or subtidal; polar, temperate, or tropics). The thermal limit for each experiment and each species was also different, depending on the rate of temperature change. The longer the experiment (the organisms exposed to stress), the survival limit was lower.

5.2. Suggestion
There are still lots of open question regarding environmental stress factors that might affect marine organisms with respect to global climate change or (sudden) environmental changes. This study still need further study to answer more questions. For example, (a) upper and lower thermal limit (in slower rate of changing, e.g. weekly, monthly) so the thermal window can be observed on a longer term; (b) upper and lower salinity limit (in short or medium rate of changing) so that the salinity window can be observed.

In nature there are many factors affecting organisms (complex factors). Combined factors (natural stress factors) can be tested to see or identify what
might happen to organisms in response to multiple stress factors (e.g. temperature and salinity).