Results to Date

- Partial or complete reproductive failure was found in northern rockfish in all habitats (Figure 4). The mechanism for this failure was predominately a lack of complete fertilization which occurred in approximately 30% of northern rockfish in all three habitats during the May season. Rates of reproductive failure were much smaller in December (prior to fertilization) and usually occurred in the form of partial ovary degeneration.
- Reproductive development for this species was confirmed to be highly synchronous. During the month of December all developing embryos were in the late migratory nucleus or early ovulation stage. In May all developing embryos were either eyed or in the late embryo body stage.
- The GSI for this species was significantly higher during the spring months due to the increased state of development during this time period. There were also significant differences between habitats during the May cruise with the higher GSI values in the coral habitat than the bare and boulder habitats (Figure 5).
- Relative fecundity was also significantly higher in the coral habitat during the month of May and was lowest in the boulder habitat during this month. A similar pattern exists in the samples from December but the highest relative fecundity occurs in the bare habitat instead of the coral habitat (Figure 6).
- Preliminary results suggest there may be some differences in productivity between habitats with complex high relief habitat having more productive rockfish.

Reproductive Failure

The following types of reproductive anomalies or failure have been noted in this species:

1. Skipped spawning occurs when a mature fish 'skips' a spawning season.
2. Ovary degeneration occurs when a large and visible portion of the ovary is in a degenerative or hardened condition.
3. Fertilization failure occurs when a portion or all of the developing oocytes do not become fertilized.

The most prominent type of reproductive failure noted in samples collected from this species is fertilization failure. This type of failure was found in northern rockfish collected in each habitat but was only recognizable during the May cruises.

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