

Figures 8.4 through 8.9 present sternohyoideus muscle from *Dascyllus aruanus* envenomated with venom Fraction 1 of *Aipysurus laevis* venom, C - cristae, M - mitochondria, N - nucleus, PM - plasma membrane, SR - sarcoplasmic reticulum, Z - Z line.

Figure 8.4: Low magnification of muscle showing normal muscle morphology, with minor swelling of sarcoplasmic reticulum possibly due to salt water buffers (Bar =  $0.93 \mu\text{m}$ ).

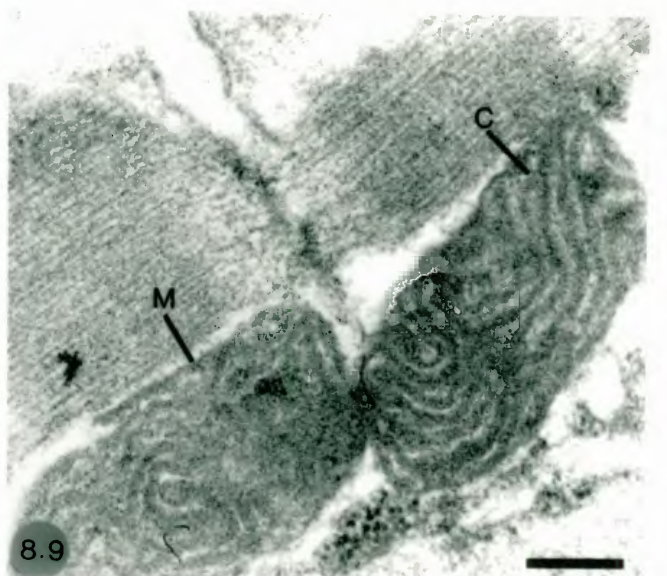
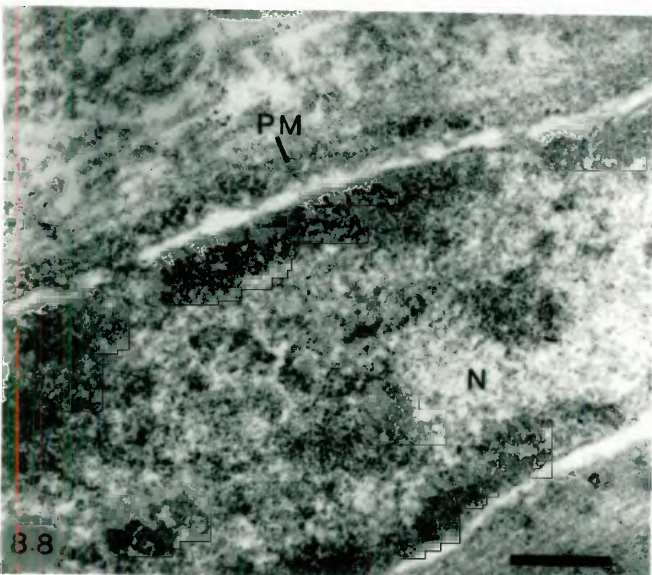
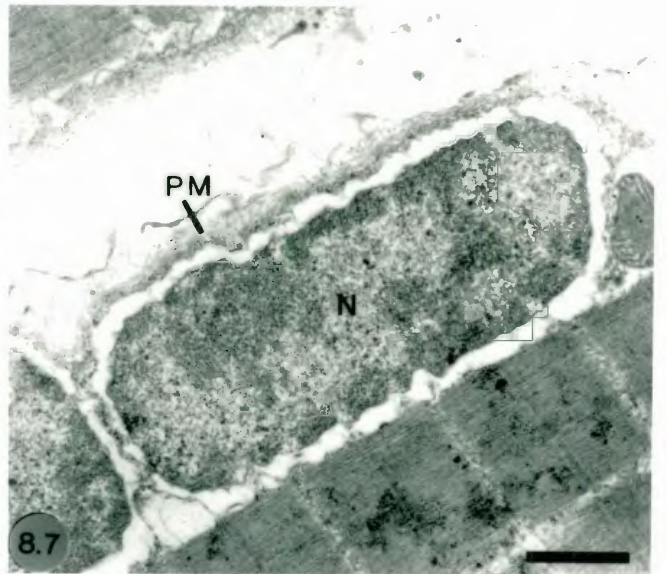
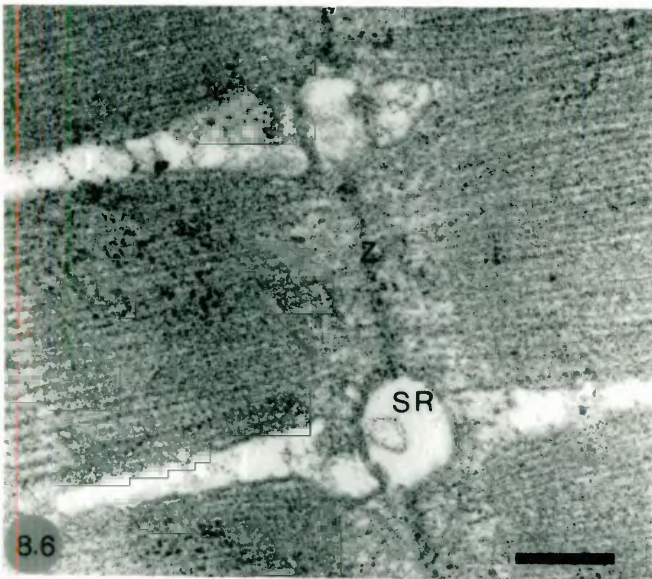
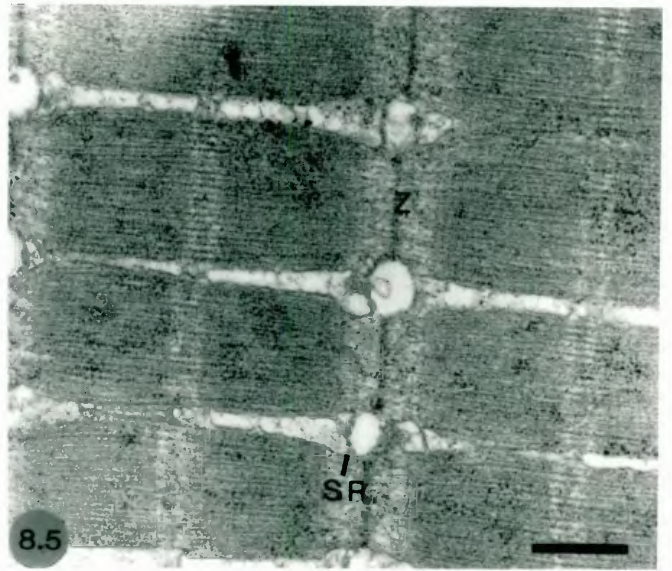
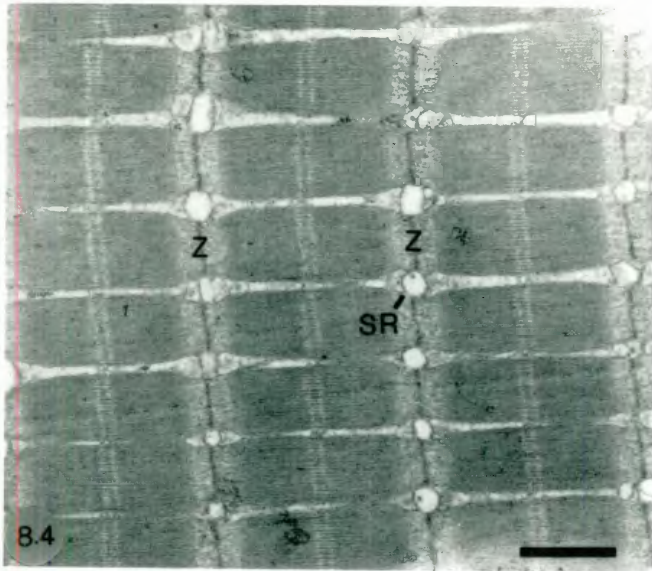
Figure 8.5: Medium magnification of muscle showing minor swelling of sarcoplasmic reticulum (Bar =  $0.52 \mu\text{m}$ ).

Figure 8.6: High magnification of muscle showing minor swelling of sarcoplasmic reticulum (Bar =  $0.22 \mu\text{m}$ ).

Figure 8.7: Muscle nucleus appearing normal in shape and color, showing minor shrinkage from the plasma membrane (Bar =  $0.93 \mu\text{m}$ ).

Figure 8.8: Higher magnification of muscle nucleus showing minor shrinkage from the plasma membrane (Bar =  $0.22 \mu\text{m}$ ).

Figure 8.9: Muscle mitochondria showing normal shape and arrangement of cristae (Bar =  $0.22 \mu\text{m}$ ).



Figures 8.10 through 8.15 present sternohyoideus muscle from *Dascyllus aruanus* envenomated with venom Fraction 2 of *Aipysurus laevis* venom, C - cristae, M - mitochondria, N - nucleus, PM - plasma membrane, SR - sarcoplasmic reticulum, Z - Z line.

Figure 8.10: Low magnification of muscle showing a definite swelling of sarcomeres and sarcoplasmic reticulum (Bar =  $0.93\mu\text{m}$ ).

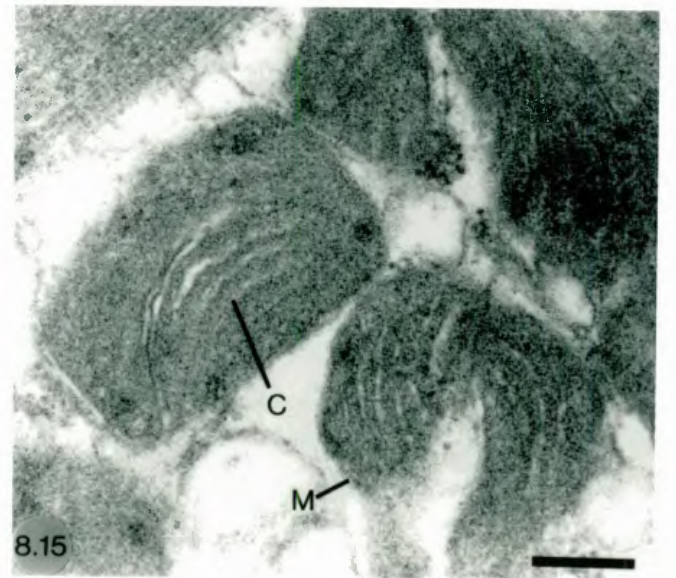
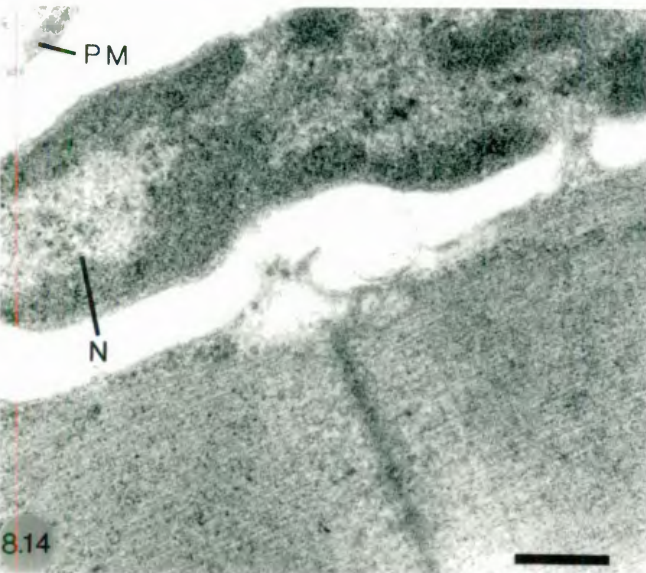
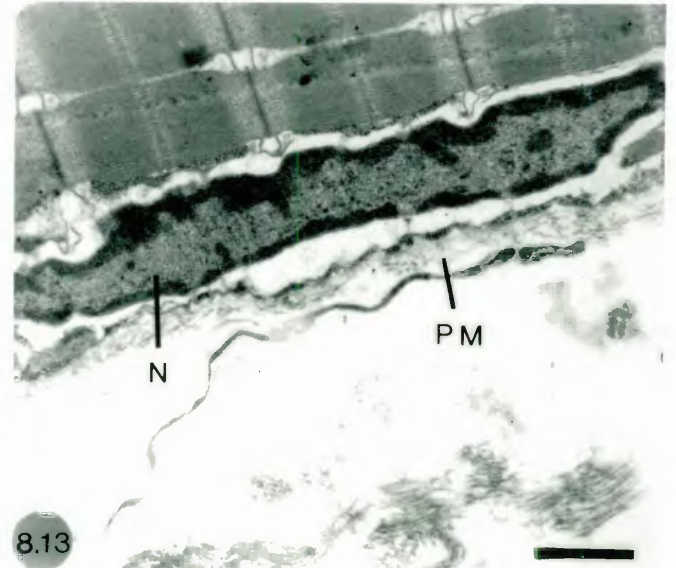
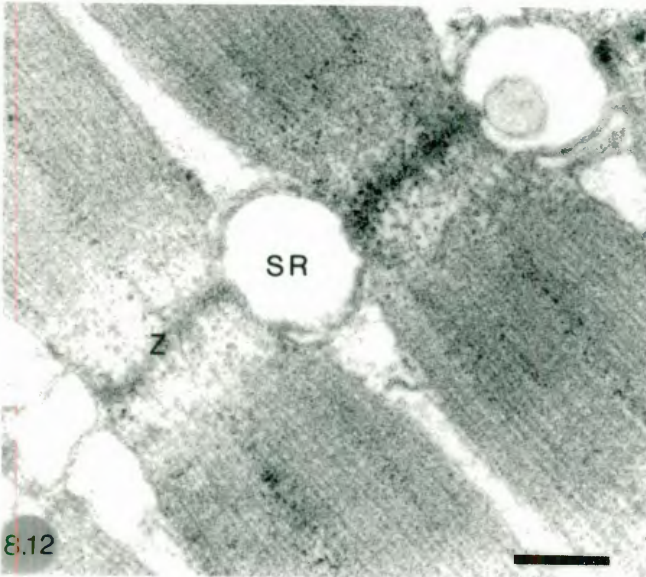
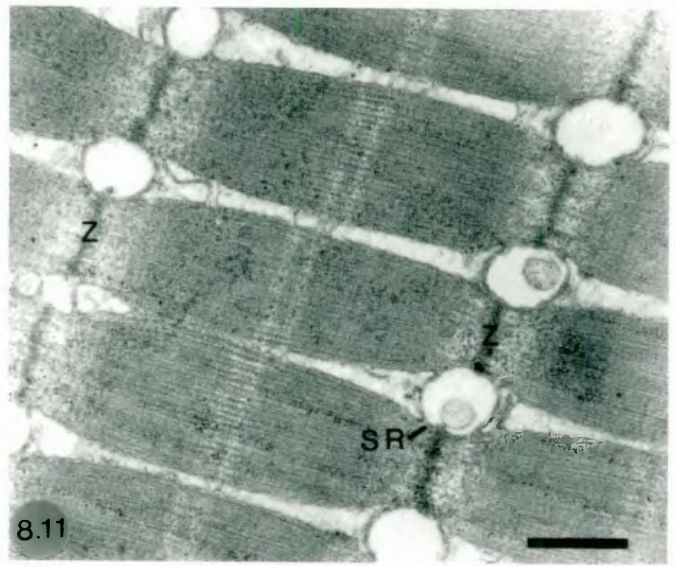
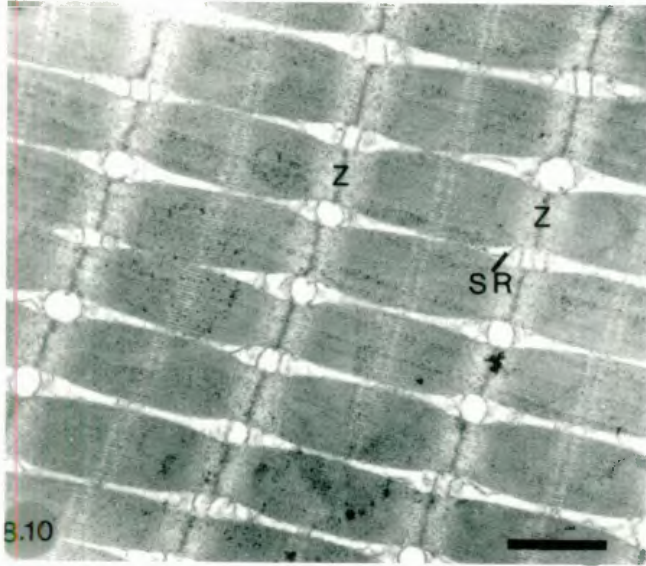
Figure 8.11: Medium magnification of muscle showing swelling in sarcomeres and sarcoplasmic reticulum (Bar =  $0.52\mu\text{m}$ ).

Figure 8.12: High magnification of muscle showing swelling of sarcoplasmic reticulum (Bar =  $0.22\mu\text{m}$ ).

Figure 8.13: Muscle nucleus which is elongated, pyknotic and showing major shrinkage from the plasma membrane (Bar =  $0.93\mu\text{m}$ ).

Figure 8.14: Higher magnification of muscle nucleus showing shrinkage from the plasma membrane (Bar =  $0.22\mu\text{m}$ ).

Figure 8.15: Muscle mitochondria appearing slightly swollen, with cristae becoming difficult to distinguish (Bar =  $0.22\mu\text{m}$ ).



Figures 8.16 through 8.21 present sternohyoideus muscle from *Dascyllus aruanus* envenomated with venom Fraction 3 of *Aipysurus laevis* venom, M – mitochondria, N – nucleus, PM – plasma membrane, SR – sarcoplasmic reticulum, Z – Z line.

Figure 8.16: Low magnification of muscle showing normal muscle morphology, with minor swelling of sarcoplasmic reticulum possibly due to salt water buffer (Bar =  $0.93 \mu\text{m}$ ).

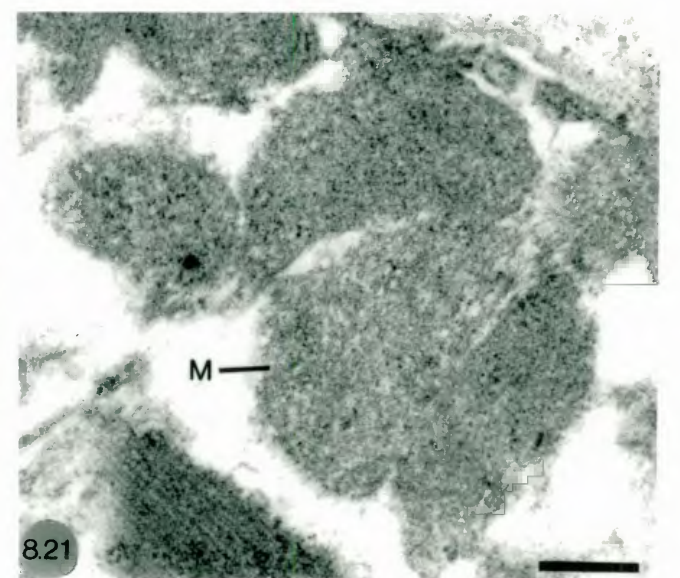
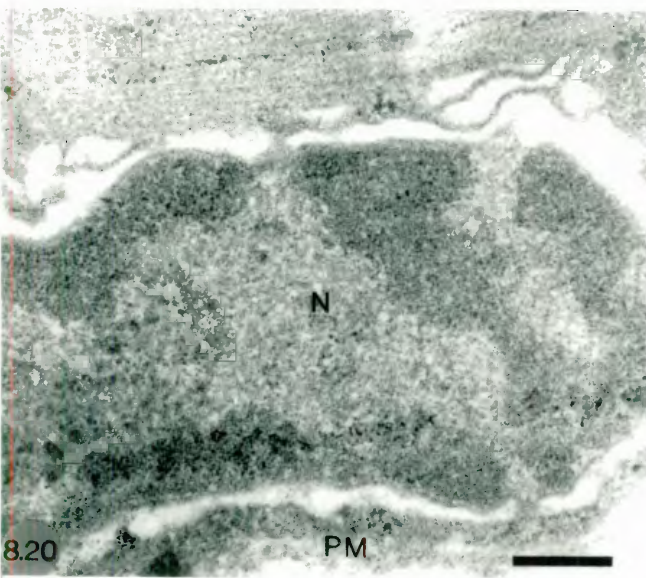
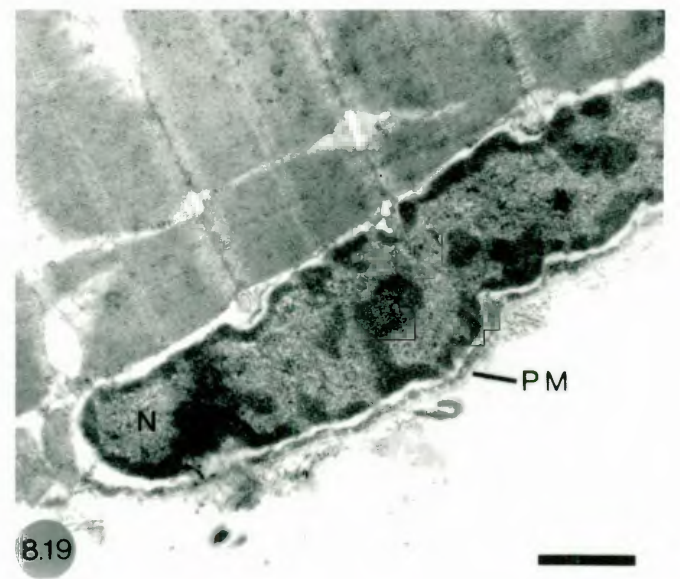
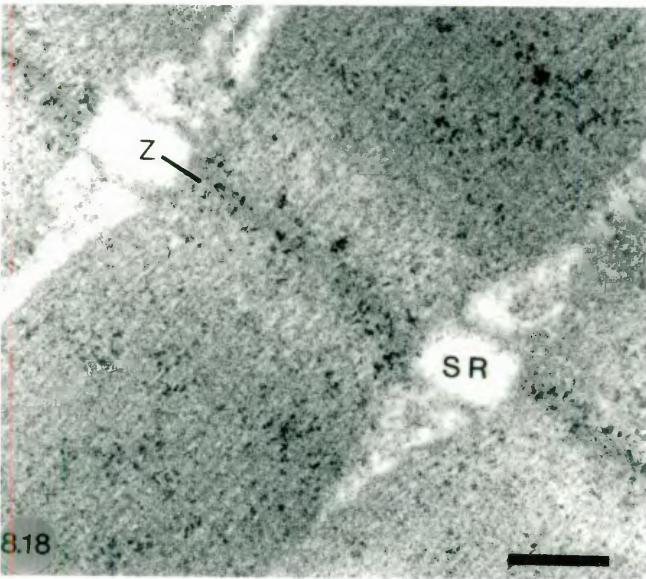
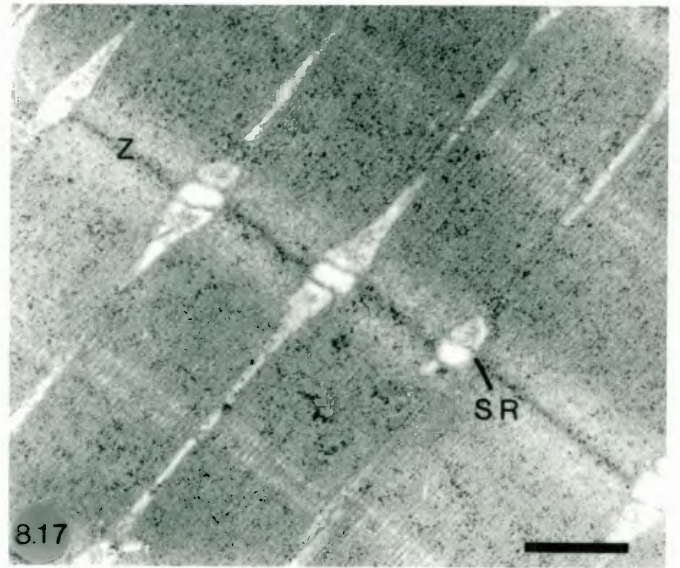
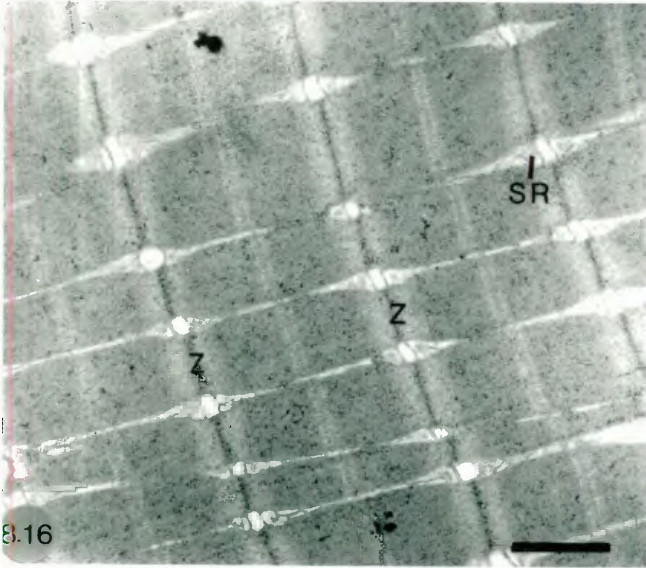
Figure 8.17: Medium magnification of muscle showing minor swelling of sarcoplasmic reticulum (Bar =  $0.52 \mu\text{m}$ ).

Figure 8.18: High magnification of muscle showing minor swelling of sarcoplasmic reticulum (Bar =  $0.19 \mu\text{m}$ ).

Figure 8.19: Muscle nucleus appearing normal in shape, but demonstrating darkened areas, possibly to become pyknotic, with some shrinkage from plasma membrane evident (Bar =  $0.93 \mu\text{m}$ ).

Figure 8.20: Higher magnification of muscle nucleus showing darkened regions and shrinkage from plasma membrane (Bar =  $0.22 \mu\text{m}$ ).

Figure 8.21: Muscle mitochondria showing intramitochondrial edema with cristae absent (Bar =  $0.22 \mu\text{m}$ ).



Figures 8.22 through 8.27 present sternohyoideus muscle from *Dascyllus aruanus* envenomated with venom Fraction 4 of *Aipysurus laevis* venom, M - mitochondria, N - nucleus, PM - plasma membrane, SR - sarcoplasmic reticulum, Z - Z line.

Figure 8.22: Low magnification of muscle showing definite swelling of sarcomeres and sarcoplasmic reticulum, with Z lines difficult to distinguish (Bar = 0.93  $\mu\text{m}$ ).

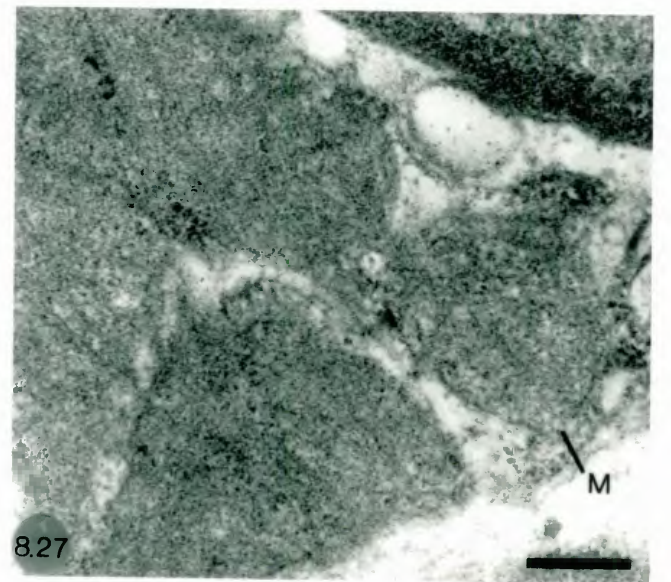
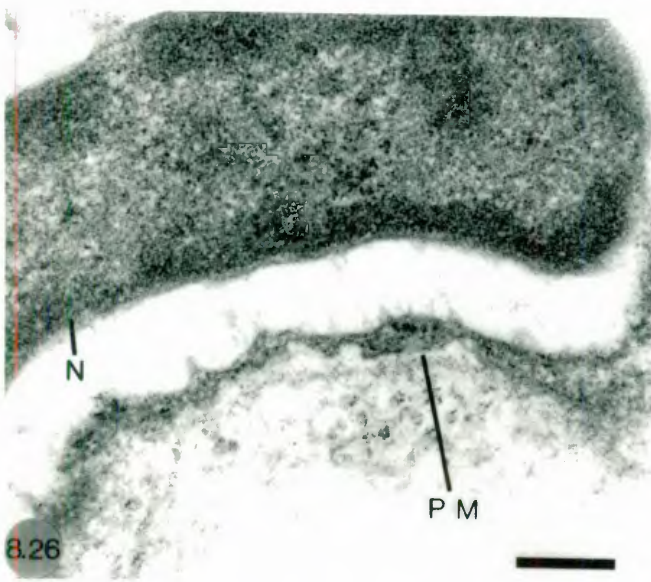
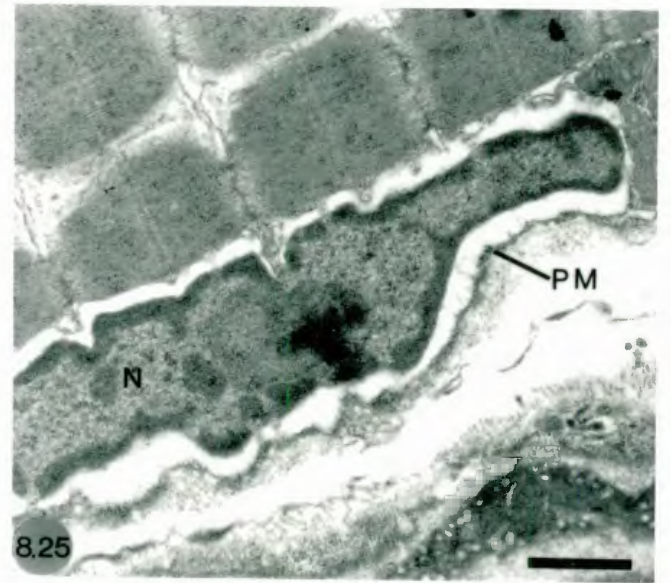
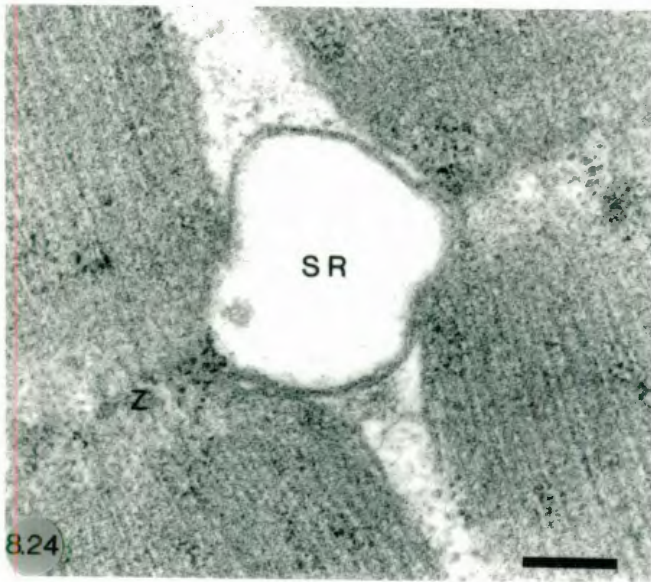
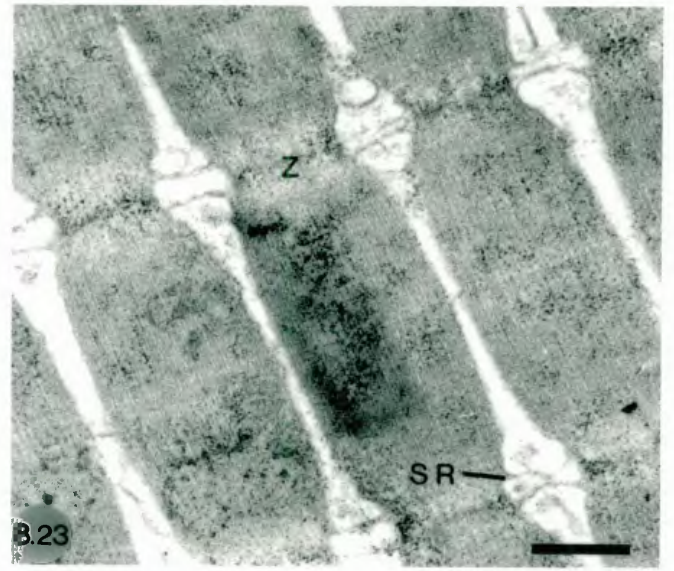
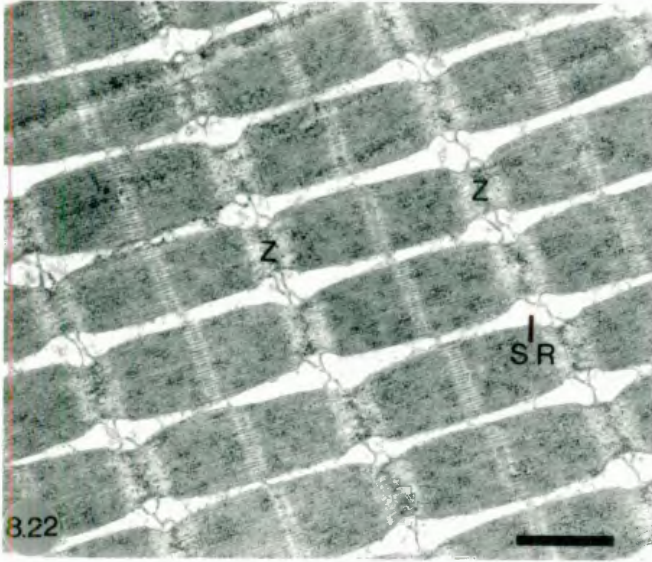
Figure 8.23: Medium magnification of muscle showing swelling of sarcomeres and sarcoplasmic reticulum, with Z lines difficult to distinguish (Bar = 0.52  $\mu\text{m}$ ).

Figure 8.24: High magnification of muscle showing swelling of sarcoplasmic reticulum, with difficulties in distinguishing triad of sarcoplasmic reticulum and Z lines (Bar = 0.19  $\mu\text{m}$ ).

Figure 8.25: Muscle nucleus becoming elongated with darkened areas, possibly to become pyknotic, with shrinkage from plasma membrane evident (Bar = 0.93  $\mu\text{m}$ ).

Figure 8.26: Higher magnification of muscle nucleus showing shrinkage from the plasma membrane and darkened areas (Bar = 0.22  $\mu\text{m}$ ).

Figure 8.27: Muscle mitochondria demonstrating intramitochondrial edema and lacking cristae (Bar = 0.22  $\mu\text{m}$ ).





Figures 8.28 through 8.33 present sternohyoideus muscle from *Dascyllus aruanus* envenomated with venom Fraction 5 of *Aipysurus laevis* venom, C - cristae, M - mitochondria, N - nucleus, PM - plasma membrane, SR - sarcoplasmic reticulum, Z - Z line.

Figure 8.28: Low magnification of muscle showing normal muscle morphology, with no swelling of sarcomeres or sarcoplasmic reticulum evident (Bar = 0.93  $\mu\text{m}$ ).

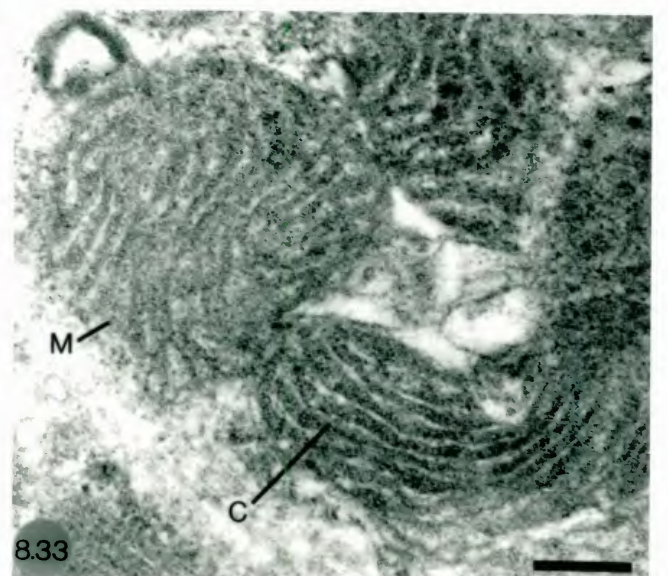
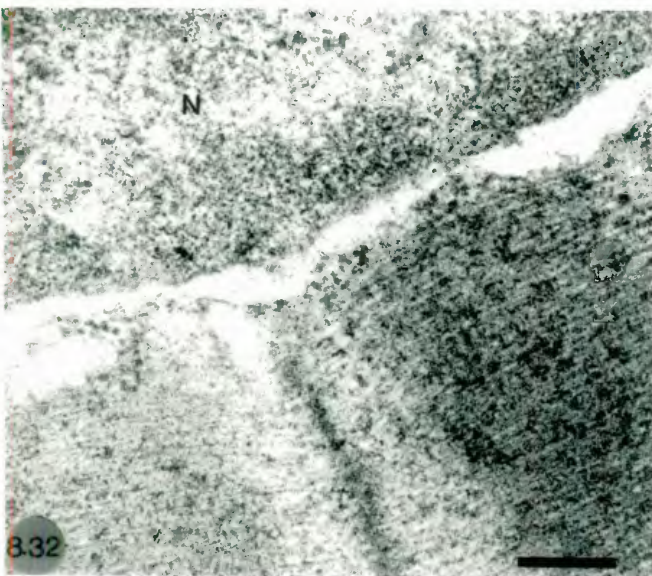
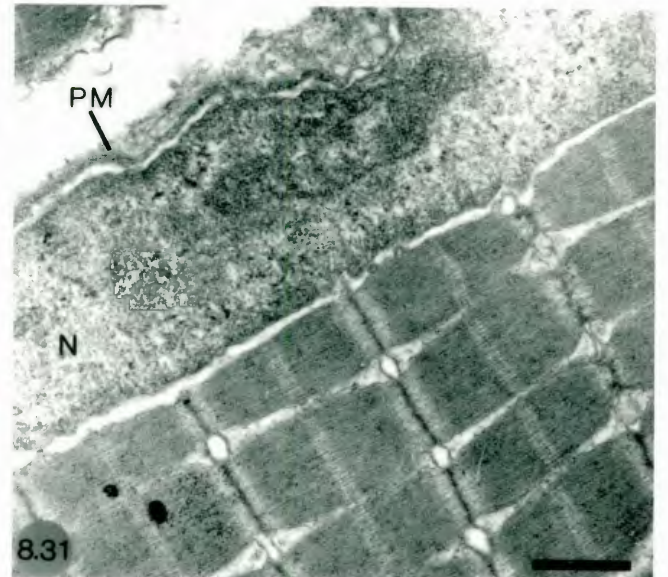
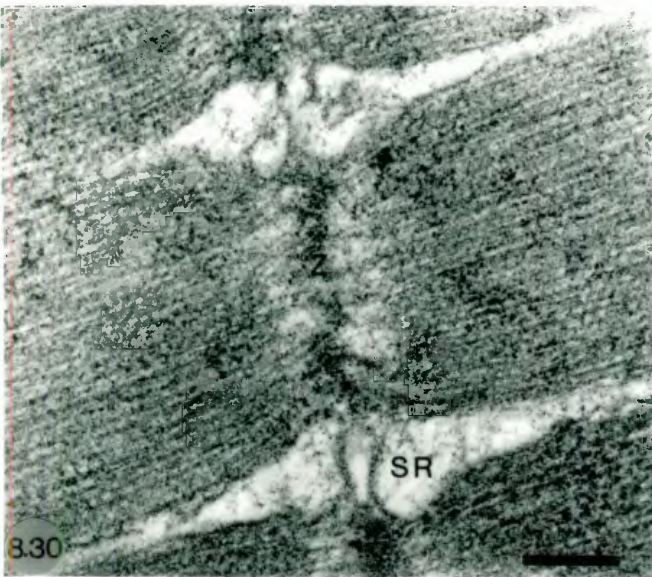
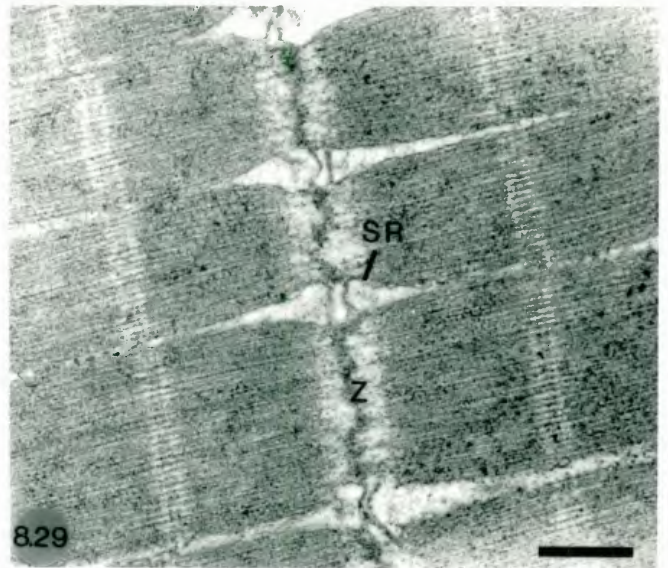
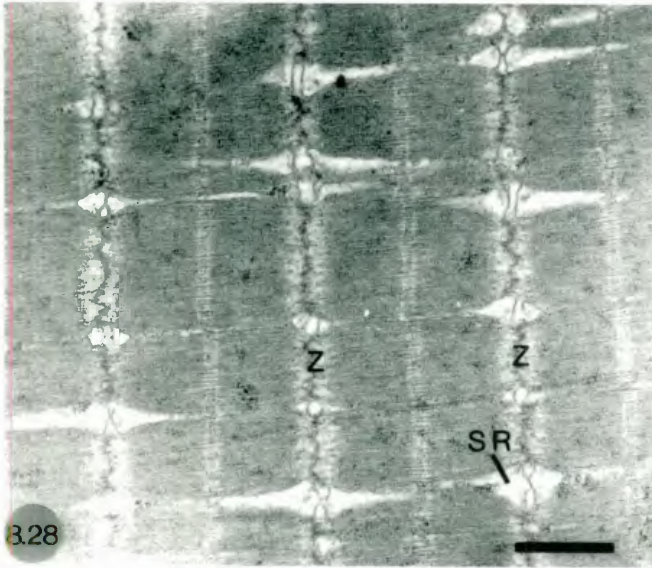
Figure 8.29: Medium magnification of muscle showing normal muscle morphology, with no swelling of sarcomeres or sarcoplasmic reticulum evident (Bar = 0.52  $\mu\text{m}$ ).

Figure 8.30: High magnification of muscle showing normal muscle morphology, with no swelling of the sarcoplasmic reticulum evident (Bar = 0.22  $\mu\text{m}$ ).

Figure 8.31: Muscle nucleus appearing normal, with no shrinkage from the plasma membrane evident (Bar = 0.93  $\mu\text{m}$ ).

Figure 8.32: Higher magnification of muscle nucleus showing no abnormalities, with no shrinkage from the plasma membrane evident (Bar = 0.22  $\mu\text{m}$ ).

Figure 8.33: Muscle mitochondria demonstrating a normal shape and cristae arrangement (Bar = 0.22  $\mu\text{m}$ ).



Figures 8.34 through 8.39 present sternohyoideus muscle from *Dascyllus aruanus* envenomated with venom Fraction 6 of *Aipysurus laevis* venom, C - cristae, M - mitochondria, N - nucleus, PM - plasma membrane, SR - sarcoplasmic reticulum, Z - Z line.

Figure 8.34: Low magnification of muscle showing minor swelling of sarcomeres, but none for the sarcoplasmic reticulum (Bar = 0.93  $\mu\text{m}$ ).

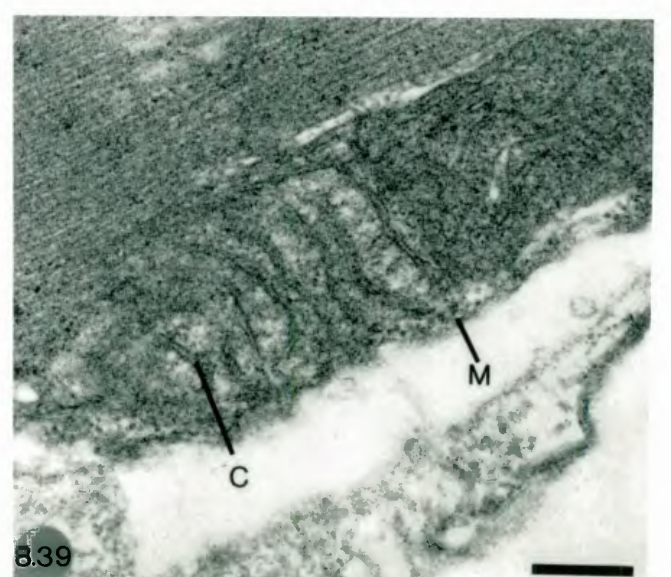
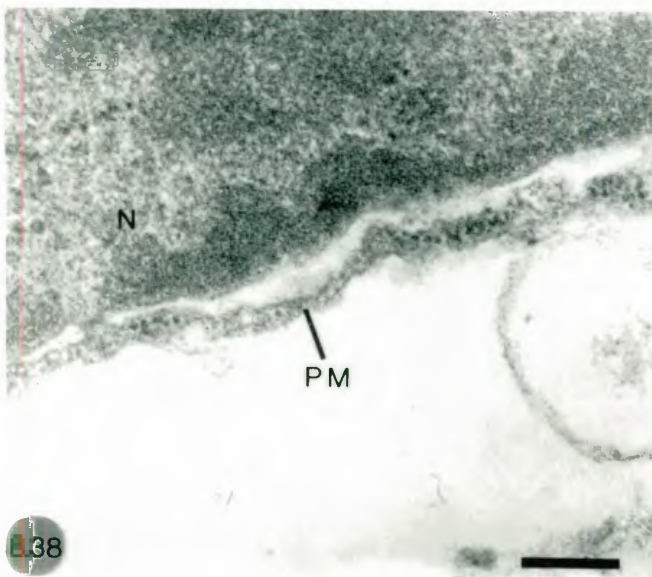
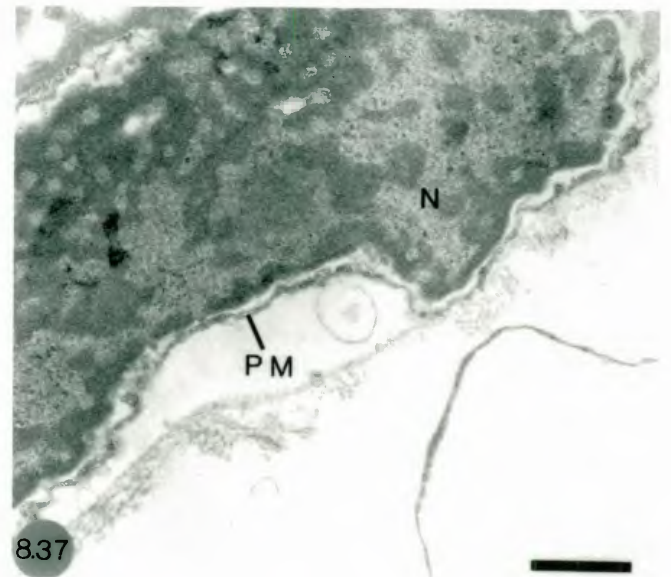
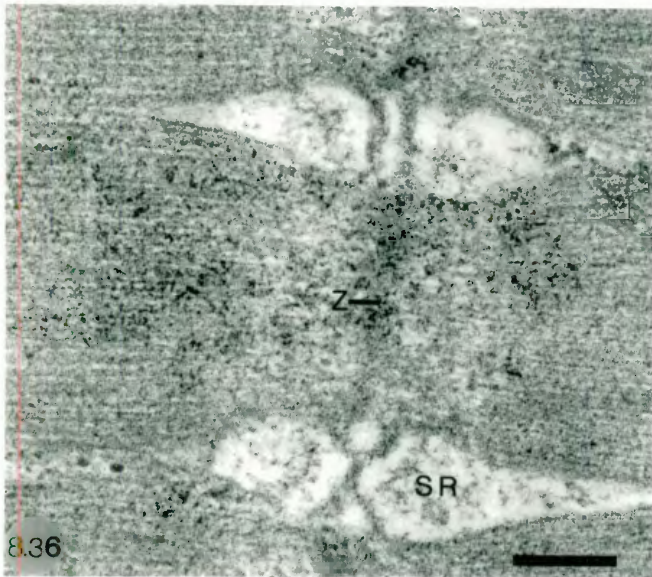
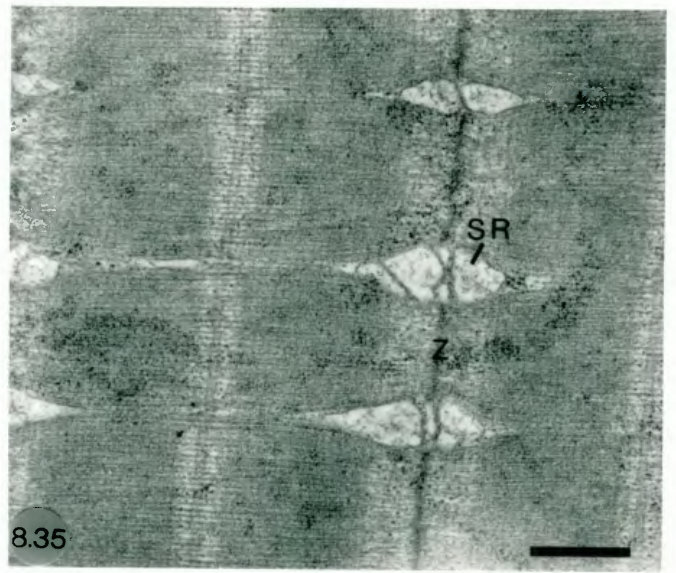
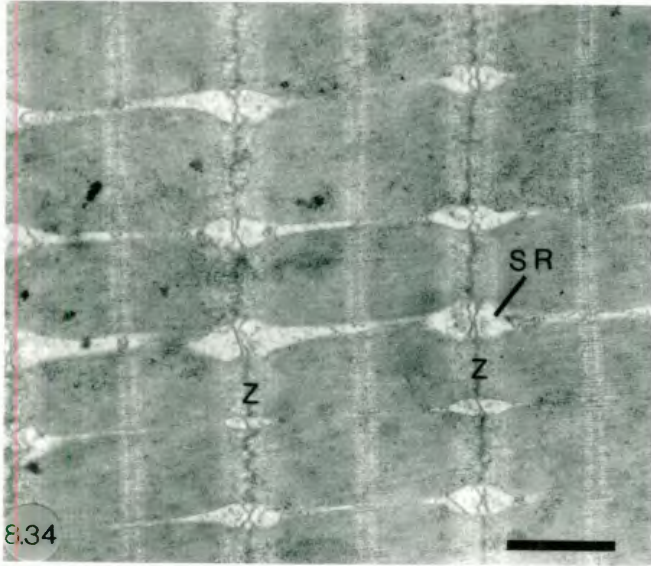
Figure 8.35: Medium magnification of muscle showing minor swelling of sarcomeres, but none for the sarcoplasmic reticulum (Bar = 0.52  $\mu\text{m}$ ).

Figure 8.36: High magnification of muscle showing normal appearing sarcoplasmic reticulum (Bar = 0.19  $\mu\text{m}$ ).

Figure 8.37: Muscle nucleus appearing normal except for darkened areas present, possibly to become pyknotic, with no shrinkage from the plasma membrane evident (Bar = 0.93  $\mu\text{m}$ ).

Figure 8.38: Higher magnification of muscle nucleus showing darkened areas, with no shrinkage from the plasma membrane evident (Bar = 0.22  $\mu\text{m}$ ).

Figure 8.39: Muscle mitochondria appearing normal in shape, but possible diruption of cristae evident (Bar = 0.22  $\mu\text{m}$ ).



Figures 8.40 through 8.45 present sternohyoideus muscle from *Dascyllus aruanus* envenomated with venom Fraction 7 of *Aipysurus laevis* venom, C - cristae, M - mitochondria, N - nucleus, PM - plasma membrane, SR - sarcoplasmic reticulum, Z - Z line

Figure 8.40: Low magnification of muscle showing normal morphology, with no swelling of sarcomeres or sarcoplasmic reticulum evident (Bar = 0.93  $\mu\text{m}$ ).

Figure 8.41: Medium magnification of muscle showing normal morphology, with no swelling of sarcomeres or sarcoplasmic reticulum evident (Bar = 0.52  $\mu\text{m}$ ).

Figure 8.42: High magnification of muscle showing normal morphology, with no swelling of sarcomeres or sarcoplasmic reticulum evident (Bar = 0.19  $\mu\text{m}$ ).

Figure 8.43: Muscle nucleus appearing normal except for darkened areas present, possibly to become pyknotic, with no shrinkage from plasma membrane present (Bar = 0.52  $\mu\text{m}$ ).

Figure 8.44: Higher magnification of muscle nucleus, with darkened areas present and no shrinkage from the plasma membrane evident (Bar = 0.22  $\mu\text{m}$ ).

Figure 8.45: Muscle mitochondria showing possible minor swelling and minor cristae disruption (Bar = 0.22  $\mu\text{m}$ ).

