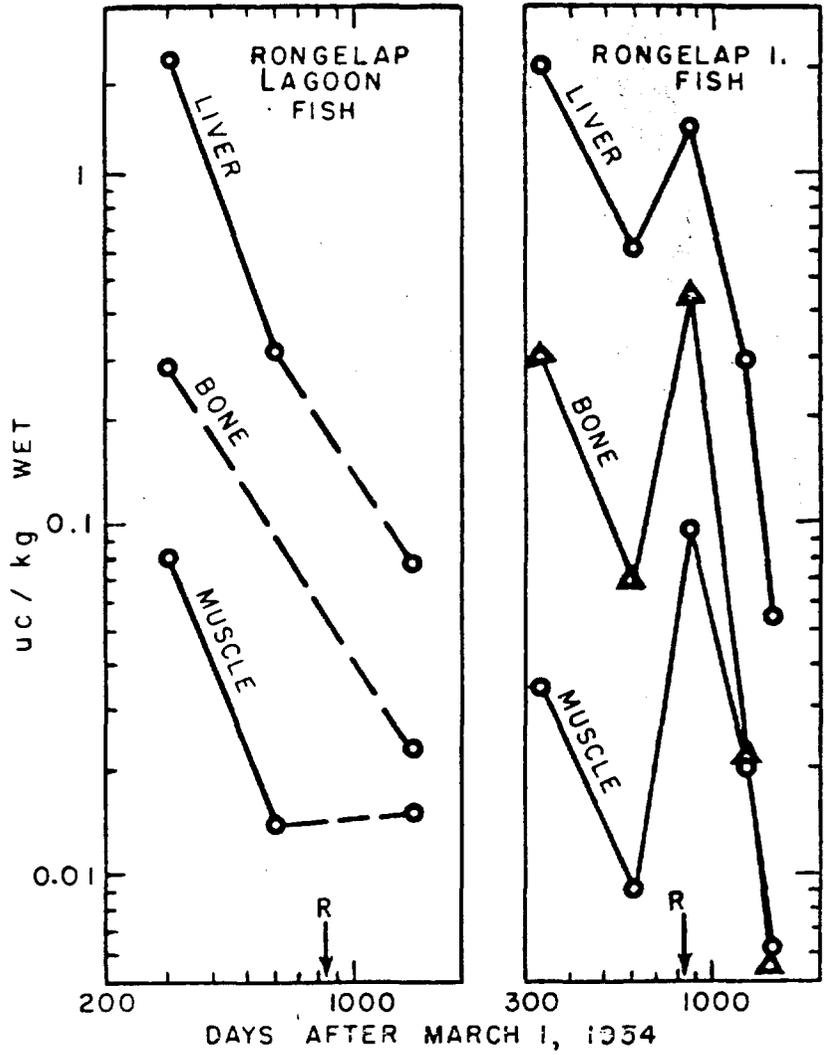


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Fig. 1. Decline over a 4-year period following the March 1, 1954 detonation at Bikini Atoll of gross beta radioactivity as measured in methane flow counters using samples of tissues of reef fishes collected at the indicated times at Kabelle I., Rongelap Atoll. "R" shows the time of the Redwing series.



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Fig. 2. Decline over a period 1 to 4 years after the March 1, 1954 detonation at Bikini Atoll, of the gross beta radioactivity as measured in methane flow counters using samples of tissues of lagoon and Rongelap Island reef fishes collected at the indicated times at Rongelap Atoll. Dashed lines indicate lack of observations immediately following the Redwing series (R).

PRELIMINARY INVESTIGATIONS

359 Hongsap Goatfish Summary

|               | Sample number | Net wt. of fish grams | Dry wt. of sample grams | Sex | γ Zn per sample | γ Zn per gram dry sample | Net c/m (Bon) sample |
|---------------|---------------|-----------------------|-------------------------|-----|-----------------|--------------------------|----------------------|
| I Gonads      | - 2           | 98                    | .115                    | M   | 100             | 869                      | 1.7                  |
|               | -41           | 115                   | .106                    | F   | 157             | 844                      | 3.6                  |
|               | - 5           | 125                   | .116                    | F   | 70              | 604                      | 2.7                  |
|               | -27           | 130                   | .114                    | M   | 75              | 658                      | 1.8                  |
|               | -15           | 249                   | .109                    | M   | 168             | 1541                     | 0                    |
| II Liver      | -43           | 45                    | .054                    |     | 21.7            | 402                      | 7.3                  |
|               | -24           | 51                    | .041                    |     | 15.0            | 366                      | 2.5                  |
|               | -23           | 55                    | .060                    |     | 31.3            | 523                      | 2.8                  |
|               | - 2           | 95                    | .108                    |     | 68.0            | 630                      | 0.5                  |
|               | -34           | 102                   | .116                    |     | 76.5            | 660                      | 0                    |
|               | - 3           | 127                   | .106                    |     | 18.7            | 100                      | 0.7                  |
|               | -25           | 159                   | .130                    |     | 47.0            | 360                      | 0                    |
|               | -15           | 249                   | .317                    |     | 153.0           | 483                      | 0.8                  |
| III Vertebrae | -56           | 43                    | .117                    |     | 25.2            | 215                      | 9.1                  |
|               | - 9           | 45                    | .119                    |     | 15.4            | 112                      | 1.6                  |
|               | -29           | 49                    | .159                    |     | 34.0            | 340*                     | 19                   |
|               | -19           | 98                    | .231                    |     | 44.0            | 190                      | 0                    |
|               | -34           | 102                   | .214                    |     | 35.7            | 167                      | 0                    |
|               | -14           | 105                   | .261                    |     | 34.3            | 131                      | 0                    |
|               | -48           | 121                   | .288                    |     | 35.7            | 124                      | 1.4                  |
|               | -25           | 159                   | .422                    |     | 70.5            | 167                      | 0                    |
|               | -15           | 249                   | .422                    |     | 76.0            | 180                      | 0                    |

\*questionable, possible contamination

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759 Kabelle Goatfish Summary

| Tissue                            | No. fish in sample | Wt. class of fish | Dry wt. of sample grams | $\gamma$ Zn per sample | $\gamma$ Zn per gram dry sample (PPM) | c/m Zn <sup>65</sup> | c/m/g dry Zn <sup>65</sup> | $\frac{\gamma \text{ Zn}}{\text{c/m Zn}^{65}}$ |
|-----------------------------------|--------------------|-------------------|-------------------------|------------------------|---------------------------------------|----------------------|----------------------------|--|
| Muscle                            | 9                  | B                 | 5.95                    | 105                    | 17.7                                  | 9.0                  | 1.5                        | 11.7   |
|                                   | 6                  | C                 | 6.57                    | 240                    | 36.0                                  | -                    | -                          | -  |
| Liver                             | 9                  | B                 | 2.42                    | 12                     | 5.0                                   | 18.8                 | 7.8                        | 0.6  |
|                                   | 6                  | C                 | 1.43                    | 840                    | 588                                   | 23.0                 | 16.0                       | 36.5   |
| Bone                              | 9                  | B                 | 2.41                    | 158                    | 57.4                                  | 46.1                 | 19.1                       | 3.0  |
|                                   | 6                  | C                 | 3.34                    | 231                    | 69.2                                  | 10.9                 | 3.3                        | 21.0   |
| G.I. Tract                        | 9                  | B                 | 6.50                    | 9000                   | 1380                                  | 450.2                | 69.4                       | 20   |
|                                   | 6                  | C                 | 4.98                    | 9000                   | 1800                                  | 16.7                 | 3.4                        | 610  |
| Ovary                             | 2                  | C                 | 0.30                    | 6039                   | 20,100                                | 326                  | 1080                       | 18.6   |
| Whole fish<br>-(head and viscera) | 3                  | B                 | 0.108                   | 22.5                   | 208                                   | -                    | -                          | -  |
|                                   | 2                  | C                 | 0.100                   | 16.4                   | 164                                   | -                    | -                          | -  |
| Gills                             | 9                  | B                 | 0.106                   | 28.0                   | 263                                   | -                    | -                          | -  |
|                                   | 6                  | C                 | 0.242                   | 58.0                   | 240                                   | -                    | -                          | -  |

67 = B = 163 grams  
240 = C = 393 grams

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