

'Gene Vat' Genetic Manipulation Devices

by Martin Gibbs

Gardasiyal Rules for 'Designing Vat Creatures'

The Temple of Ksarul has various unique Temple spells for the use and manipulation of Ancient devices. The knowledge gained while the spell is in force is enough to know how to use and manipulate the settings and controls of such devices, but this knowledge then 'fades' after the spell expires. If this knowledge was gained via actual personal study and/or 'trial-and-error' then of course the mage may be gradually acquire a permanent skill in the operation of these complex often dangerous machines. This article is intended as a base guide to the operation of the 'Gene Vat' genetic re-combination devices that were in use. The accumulation of knowledge is one of the primary Goals of both the Temples of Thumis and of Ksarul, however the latter covets such knowledge jealously. There may indeed be other sects, races, temples and scholars who also have accumulated knowledge of how to use the ancient technology, but generally such knowledge was buried both physically and mentally from the cataclysmic upheavals of the Time of Darkness.

If a Mage discovers one of the ancient technological laboratories or 'Gene Vats' that produced genetically grown creatures—then here are the rules for making new creatures. Also refer to the rear pages of the *Gardasiyal Tekumel Bestiary* by MAR Barker and Victor Raymond (pgs. 54-56).

Mutations and Mankind

The 'Gene Vats' as they were known, are facilities for the biological 're-engineering' of raw protoplasmic matter and base creatures, into new or genetically prototyped and designed creatures. The facilities were either experimentally based, which have but a few Genetic Chambers, with offices, (formerly) 'sterile' lab areas for development and genetic engineering, and some subject or raw materials storage facilities. Other areas were reserved for cryogenic storage, secure containment of 'experiments' and destruction of waste materials and unwanted results. Some of the failed genetic experiments escaped destruction in the 'disposal areas' (fitted with flame jets, laser 'slicers, drains and compacters/ crushers. These genetic monstrosities occasionally broke out from containment or disposal areas, and made their way either down into the Underworld or out into the planet surface. There they either adapted or died. When the enough of these mutated and modified creatures escaped and survived, then they may have even melded into Tekumel's natural fauna, perhaps mating with their genetically similar cousins (Eg; The Chnehl or 'Ape-Mutants'). The Renyu were possibly created from mutated canine stock.

Some modified species of humankind were also created, especially by 'The Lords of the Latter Times'. Examples of human sub-species existing on current Tekumel are: The Hehengu and the Hehecharu of Purdimal, the Sikun or "Little Men", The Qol "Serpent-Headed Ones", and the Vorodla "The Flying Undead". These last two creatures are not actually re-animated human dead, but rather genetically restructured human 'stock' and not really 'The Undead' as Lord Sarku's minions. There are also varieties of mankind that have been naturally cross-bred through the passage of time and mutation or natural variations of the Tekumel human race, producing other human racial types such as; The Nlu'ss, the giant northern 'barbarians', The Nom, and notably the gilled and pallid men from the Gurek of Niktanbo' of Rulla', unique to the region around Lake Parunal (See Gurek No. 14 from *Armies of Tekumel II, Yan Kor and Allies*). Also see the listing for Nyagga, a non-human aquatic creature that appears to be capable of mating with humans to produce such 'cross-breeds' such as near the cities of Ngaku and Pranju in the North-East.

Gene Vats and Genetic Re-engineering

Each 'programmable' Gene Vat has a capacity to produce or 'grow' 1 being of up to size 'L' Use *The Tekumel Bestiary*, Section 2.1 *Calculating Fighting Ability* Gardasiyal Rules, and *Deeds of Glory* Volume 3 Referee's Guide. The creation of the new creature and its 'incubation' or 'maturation time' is calculated using the following Factors:

- The number of 'Criticals to Kill' ('Crits'). Use 'Hit Dice' (round down) if you can't find this.
- The creature's proposed Size. Small creatures receive a modifier of 0.5, Medium 1.0 and Large 1.5 (A higher Factor for even larger creatures).
- The creature's intended Intelligence (from Low = 0.5 to Very Intelligent =1.33).
- The creature's Speed (from V. slow 0.5 to V. Fast 1.5).
- The Time that the creature is developed over (weeks).

The **Base Formula** to calculate the **Maturation Time** to engineer a New Creation therefore is;

Creation Time = 'Crit's to Kill' x Size factor x Intelligence factor x 1 week.

Remember a 'week' on Tekumel is 6 Days long. The Gene Vat bio-engineering machines used a sample coding of the creature from an imprinted Genetic Disc. An organic sample of the same creature or one that is to be 'hybridised' is also placed into the Gene Vat Chamber, and then the process may be initiated. There is no guarantee that a 'New Process' will be successful, and new experiments will likely take some considerable materials, risk and 'trial-and-error'. Use a the Skill's Success Tables on an appropriate Skill (say 'Ancient Devices' modified by cross-skills and aptitudes) OR a Ksarul Mage may cast his or her *Comprehension of Devices* Temple Spell for full guidance in operating the bio-machinery.

An example is illustrated below:

To create 1 Vorodla, a small sample of one is needed (any amount), the growth medium or protoplasm is filled in the Gene Vat Chamber (occurs automatically in the 'mass production' facilities – if they are still functioning properly!), and the correct "Bio-Genetic Disc" is inserted into the main operational console. Then "Shake 'n Bake" ... Return after expected Maturation Time to see what has been created.

Subject: A Vorodla : (3) 'Crits to Kill' : Medium (0.8) : Semi-intelligent (1.0)

= 3 x 0.75 x 1 x 1

= 2.4 x 0.75 x 1.0

= 2.25 weeks or about 13-14 Days.

The GM may keep the maturation time secret from a player using the Vats attempting to craft a creature.

Also, the GM may add other Factors into the formula for any Special Abilities of a creature or desired creation. Remember that only creature designs that have an existing 'Bio-Genetic Disc' can be created with any certainty. Any new experiments will have to be 'tried'—to see what, if anything, emerges from the Gene Vat.

A suitably qualified Gene Vat researcher, will have to experiment with the Vats to acquire some Skill in using them, without other either sorcerous or demonstrative assistance. Written and coded instructions may be either quite archaic or simply too complex culturally scientifically for a Tekumeli scholar to understand (With the exception of the Master Mages that comprise the Undying Wizards of historical legend). Priests and Lay-Priests of Ksarul may have some aptitude from their Theological Professional Skills. The casting of the *Comprehension of Devices* enables the operation of any of the technological machines of The Ancients, however, the knowledge that is temporarily gained using the spell is not afterwards retained. A Character must have some prior skills that are of at least Advanced or Academic level (3) Points or 1500 ExP per Level) in any of the following or similarly suitable skills;

Sorcerer (4), Mathematician (3), Scholar (3), Historian (3), Healing Magic (3) Alchemy (3), Ancient Devices (3), Medicine (3), Physician (3), or Underworlds and their Denizens.

Any character who has 10 levels of the Priest Skill.

Have the Character make a Skill Success % Roll on the Skill Success Table. The Character must have a cumulative total of 10 Levels of any of the requisite base skills. They will then qualify to roll % dice on the Level 1 row of the table at 'Harder' test level. After the maturation time of the subject creature has been reached, then roll the % dice, interpret the results as follows:

F = Total failure. Haul the either 'living' or otherwise genetic mess off to The Pit...

A = Apparent Success—but with at least 1 minor flaw, defect or unexpected mutation.

S = Success! Copy the protocol to Bio-GenDisc. You make what you wanted to create.

The Character then gains Experience Points and attains Level 1 in Gene Vats skill (a sub-skill of Ancient Devices. Priests of Lord Ksarul that have at least Priest or Sorcerer Level 10 move UP one Skill Level (from Level 1) for each successfully grown creature that is created. (Note: without the aid of the Temple Spell *Comprehension of Devices*).

Please note that 'Failures' also 'remove' gained competence or experience points awarded to this skill. This represents 'going down the wrong path' of research or learning in this complex skill. Each Success moves the Skill Success Table difficulty level across to one step that is 'easier' or better for the operator. When 'starting out', it therefore takes but a few failures to show that you really have no idea of how to operate this complex equipment. Further 'fiddling' will cause catastrophic malfunctions or failures, possibly resulting in horrible results, damage to the technology or even explosions.

Once some expertise is gradually acquired, then a furthering and refinement of techniques may be implemented, such as; Mass production using multiple Gene Vat chambers, augmentation and improvement of genetic designs (ie: more natural integument/ armour), 'hybrid-fusion' of differing subjects (Ever seen the movie *The Fly?*). For each more complex experimentation, raise the Skill Success Difficulty by one Level across the chart (ie: from Harder to Difficult, Difficult to Very Difficult. Each plausible improvement in a Created Creature's Statistics moves the Skill Success Roll across one harder level. It is best to experiment in small improvements!

Once success is achieved at Easy Level, then the process is refined sufficiently enough for imprinting onto Bio-Gen Disc. It may then be replicated without major difficulty.

Good Experimentations!

Senior Proctor, Mrittan hi Gribbsa, 19th Circle Lay-Priest of Lord Ksarul, Bey Su.

Table of Genetically Engineered Creatures of Tekumel

Sikun "The Little Men": HBS: 50-62, Damage Table B (1-5 pt) , BD Pts 15+1d10, Crits = LW, INT: high animal , Speed: fast , Size : small , Armour : 0 , Move = 90

Qol "The Serpent-Headed Ones": HBS: 100-137, Damage Table C (2-11 pts), BDpts 30 +1d10, Crits = 1, INT: intelligent, Speed : ave , Size : medium, Armour : 1 , Move = 90

Vorodla "The Flying Undead": HBS: 150-175, Damage Table C (1-10 or weapon), BDpts 60 +1d10, Crits = 3. INT: semi-intelligent, Speed : fast, Size : medium, Armour : 2, Move = 60 / 240 (fly). * Special: Regeneration, fearless morale, numbing 'poison', produces loss of vitality (Stamina?) and memory loss (Intelligence) Resistance Roll / 'hit'. (My interpretation : They are genetically 're-engineered human stock).

Ma'ev Luach Varos "The Ones Who Run Away": mutated version of the Terran Horse, but with a somewhat larger brain. No Stats listed however my suggestion is as follows: HBS: 100-120, Damage Table C (trample) or A (bite/ kick), BDpts 40 +1d10, Crits = 2, INT: intelligent, Speed = very fast, Size : large, Armour : 0 , Move = 60 (trot)/ 240 (gallop). * Native to the mountainous regions on the Great Southern Continent *

Sro "The Dragon-King": Mutated ancient reptilian stock. HBS: 300-540, Damage Table E (2-20)/ G (3-30) and by weapon (Gt. Swords x2), BDpts 190 / 300 +1d10, Crits = 9 / 15, INT: semi-intelligent, Speed : ave, Size; very large / huge, Armour : 7 , Move = 90/120/200.

Chnelu "The Ape-Mutants": HBS: 100, Damage Table C, BDpts: 30 +1d10, Crits = 1, INT: semi-intelligent, Speed : ave, Size: medium, Armour : -1 , Move = 120.

Renyu "The Loyal Follower": I believe that they are mutated canine stock! HBS: 50-70, Damage Table C (1-10), BDpts: 30 +1d10, Crits : 1 , INT: semi-intelligent, Speed: ave, Size: small , Armour : 1 , Move = 120.

The Hehecharu and Heheganu "The Old Ones" of Purdimal and similar.: The grey, squat human-mutants and cross-bred human stock that inhabit the low lying swampy areas and squats of Purdimal city slums. No Stats to hand, but I believe the description of them is that they are smaller in height, but thicker stature, as intelligent as any other huan racial type, wide and large black 'saucer' eyes, sloping heads? And they must have 'dark-vision' or extra-spatial awareness. They can cross-breed with other humans.

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