


PYRAMID[®]



Issue 3/33 July '11

LOW-TECH



THE DEADLY SPRING

by Douglas H. Cole

AT PLAY IN THE FIELDS
by Matt Riggsby

A KILLING BREATH
by Thomas Weigel

DENIS LOUBET '85
MEDIEVAL PRISONS
by David L. Pulver

ROMAN TECHNOLOGY
by Kenneth Peters

STEVE JACKSON GAMES

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Bogan wæron bysige.
(Bows were busy.)
– “Song of the Battle of
Maldon” (991 A.D.)

Article Colors

Each article is color-coded to help you find your favorite sections.

Pale Blue: In This Issue

Brown: In Every Issue (letters, humor, editorial, etc.)

Dark Blue: **GURPS** Features

Purple: Systemless Features

Green: Distinguished Columnists

COVER ART

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INTERIOR ART

Greg Hyland

IN THIS ISSUE

In bygone eras, innovators worked tirelessly to improve, invent, and innovate. We're bringing this entrepreneurial spirit to *Pyramid* with an entire issue devoted to *Low-Tech*!

The bow was the firepower of its era. Thanks to *The Deadly Spring*, you can have the same level of intricacy and nuance with bows that gun enthusiasts already enjoy in **GURPS**. Whether you like your bows cinematic or realistic, this detailed optional system lets you design amazing weapons to your exact specifications. For those who don't want to mess around with math, it also features 13 ready-to-use bows, from ancient to modern and everything in between. Fire away!

Find yourself *At Play in the Fields* with **GURPS Low-Tech** co-author Matt Riggsby as he reveals some optional agricultural rules that build off the foundation laid in **GURPS Low-Tech Companion 3: Daily Life and Economics**. Learn how to make money, improve farmland, and determine the ideal combination of crops and farmers to support the local aristocrat and his on-staff band of adventurers.

If you need a place to stay for a while, simply tell the local sheriff what you *really* think of him. You might get to “enjoy” the hospitality of *Medieval Prisons*, in the latest *Eidetic Memory* by **GURPS Basic Set** co-author David L. Pulver.

It's one of the most basic ranged weapons, and it can be among the deadliest in the right hands – or mouth. Discover how a blowgun can turn a puff of air into *A Killing Breath*, including **GURPS** stats for six blowgun sizes (plus nine types of ammo), an assortment of modifications, three new perks, and three new **GURPS Martial Arts** styles.

When in Rome . . . you *really* want to feel like you're in Rome. Kenneth Peters (co-author of **GURPS Ultra-Tech**) can help. A perfect companion to **GURPS Imperial Rome** and **GURPS Martial Arts: Gladiators**, *Roman Technology* uses **Low-Tech** and its companions to detail the era's delights. It also includes **GURPS** stats for nine “new” vehicles. Beware of debunked myths!

Even with all this innovation, we appreciate the classics – as you'll see with this issue's installments of *Random Thought Table*, *Murphy's Rules*, and other interesting *Odds and Ends*.

Whether you're keeping the fields fallow or the feudal lords free, this issue has insight and information you can use. Create yesterday like there's no tomorrow!

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FROM THE EDITOR

UNUSUAL INNOVATION AND EXOTIC EXPERIMENTS

This issue presents one of the crunchiest articles we've ever run in *Pyramid*, with the bow-design rules in *The Deadly Spring* (pp. 4-15). (There's part of me who wants to contrive to do a World War II issue, just so I can title a sequel *Spring-Time for Hitler* . . .)

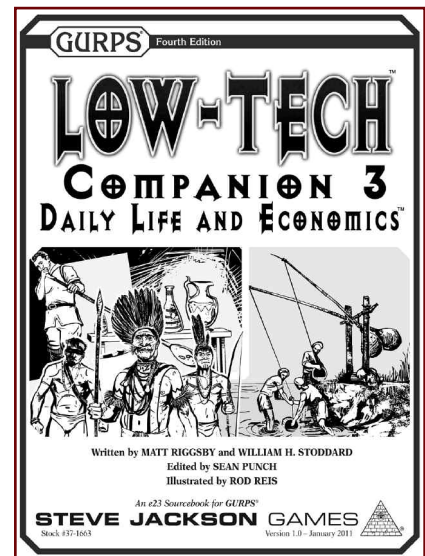
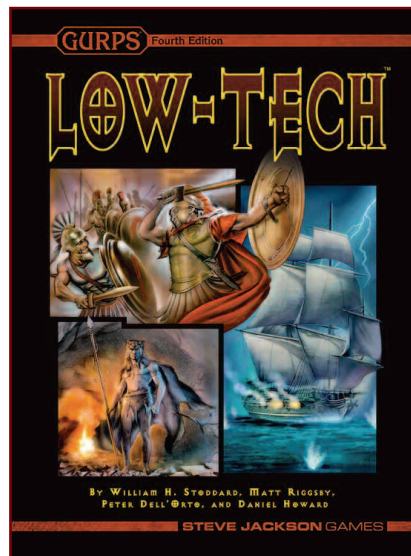
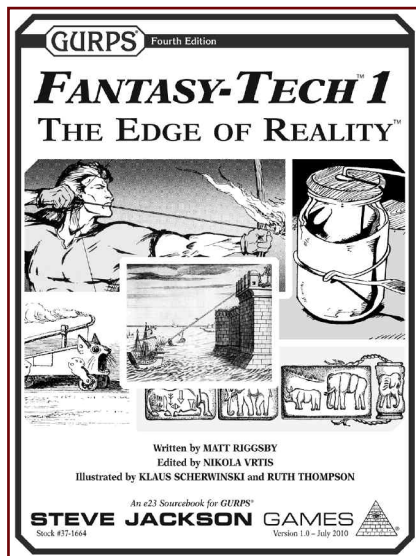
In a lot of ways, the crunch of that article is a throwback to earlier days of *GURPS* game-magazine goodness. I remember the confused delight I felt when I encountered Ann Dupuis' character design rules for horses from *Roleplayer* #21. ("Why on Earth would I ever want this? Hey, it's really cool . . . when can I use them in my game?!") Or the original mass combat rules from *Roleplayer* #30, which have gone on to have a long and healthy career in the *GURPS* universe.

Pyramid is the place where we can try new and interesting ideas, and see how they stick. Of course, the important part of

that idea is seeing how they "stick" – in other words, how much do you, the magazine-buying audience, like what we're doing? So this month we have a specific nod to the folks who really like crunchy design systems, plus some historical goodness, advanced agricultural rules, and a greatly expanded *type* of weapon that should open up all kinds of possibilities. Hopefully something there appealed to everyone . . . now we just need to figure out what to do more of!

WRITE HERE, WRITE NOW

The best way to make your thoughts known is via the written word (unless you're my wife, in which case letting me know while I'm rooting around the refrigerator is a better bet). You can join the public discussion about this issue at forums.sjgames.com. Alternatively, you're always welcome to write us privately at pyramid@sjgames.com. We love to hear from you!



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THE DEADLY SPRING

BY DOUGLAS H. COLE

The bow and arrow in various forms has been used as a tool for survival for tens of thousands of years, and war for at least the last 5,000. Favored by woodland elf and Mongol horde, the bow is well represented in both fiction and reality.

This highly optional system (modeled on the engineering mechanics of beam bending) provides a way to generate variant *GURPS* game statistics for bows of most kinds. The design sequence is as follows:

- Choose the draw force, working length of the bow, and target draw length.
- Choose the bow components and materials.
- Select the cross section and shape of the bow staff; decide if you're building a compound bow or crossbow (or both!).
- Perform calculations to see if the bow can meet the design goals; adjust aspects if it's impossible to build. This may require some iteration!
- Select an arrow appropriate to the bow's desired use.
- Derive the game statistics.

When the design is finished, you'll have game statistics for the bow based on simplified real-world physics. For those who don't want to deal with the math to devise their own, a selection of over a dozen new sample bows is described on pp. 13-14.

Note that bows generated with this system have a "flatter" damage curve than the bows from standard *GURPS*: bows with low draw weight tend to be a bit higher in damage, while the higher draw weight bows are lower, especially using the "realistic" scale. Crossbows – with short draw lengths and heavy, inefficient limbs – see damage drop remarkably (though accurately). To compensate, archers can invest in Strongbow (*GURPS Power-Ups 2*, p. 7) and ST, Lifting ST, or Arm ST to draw the heaviest bow they can, especially if using an *optional* rule that cuts down aiming time if you pull at max force. The design system allows flexibility in bow design, with only the physics of springs and strength of materials as speed bumps.

Bow Terms and Evil Math

For a handy reference to terms related to bows, crossbows, and arrows, visit "Online Glossary of Archery Terms," *Wikipedia*, at en.wikipedia.org/wiki/Glossary_of_archery_terms and *The Crossbow Defined* at thebeckoning.com/medieval/crossbow/xbow-def.html.

Bow design uses many complicated equations. A spreadsheet can help facilitate the process.

FORCE AND DISTANCE

Bows are described with a draw weight (or force, F, in pounds) at a draw length (L, in inches): 45-70 lbs. at 28" draw are hunting bows, 100-160 lbs. at 30-32" draw might be suitable for a Mongol war bow, while 1,250 lbs. with a 7" draw might be a heavy, steel-limbed crossbow.

Draw Weight

A bow may be drawn with both hands at up to $2.5 \times$ Basic Lift (ST equal to the square root of $2 \times F$). A ST 14 bow is thus up to a draw weight of about 100 lbs. – considered low-end for an English war bow!

Crossbows and footbows may be drawn manually at a draw weight of up to $8 \times$ Basic Lift (ST equal to the square root of $5/8 \times F$). The use of mechanical devices can increase this, and historical steel crossbows could have over 1,000 lbs. draw!

Lifting ST (p. B65) lets the archer draw a stronger bow by increasing his ST directly. Strongbow and Crossbow Finesse (*Power-Ups 2*, p. 7) increase drawing power through efficiency of movement and training. When figuring this improvement, *optionally* increase Basic Lift when calculating the allowed draw weight by 15% at DX+1 and 30% at DX+2 *instead* of increasing ST, keeping the bonus constant regardless of ST.

In standard *GURPS*, a bow's ST is used to determine damage. With the new system, ST is only used to rate if you can draw and hold aim – the interaction between draw length, efficiency, and arrow weight is too complicated for damage to be based only on ST, especially for crossbows.

Readying Time

An English longbowman would typically fire his war bow at a rate of roughly 10 arrows per minute, or six seconds per arrow. The most realistic way to model this in *GURPS* is as two Ready maneuvers to draw and nock an arrow, two Ready maneuvers to pull the very powerful longbow, one second to Aim, and finally one more to Attack.

As an optional rule, drawing a bow requires one Ready maneuver for each multiple of $2 \times$ Basic Lift draw weight for the bow, or fraction thereof – up to the maximum values of $2.5 \times$ Basic Lift for a hand bow, and $8 \times$ Basic Lift for a footbow or crossbow. This is in addition to the Ready maneuver needed to first retrieve an arrow and the second Ready maneuver properly nock it.

AT PLAY IN THE FIELDS

BY MATT RIGGSBY

GURPS Low-Tech Companion 3: Daily Life and Economics presents the broad outlines of subsistence agriculture, but obviously much more is involved in growing things than mere personal survival. What can I grow that *isn't* just in support of a hand-to-mouth existence, players may ask? How can I get more and better farmland? How much does it all cost, and how much can I get for it? This article presents some potential answers for the GM and players who want to get their hands dirty with more details about agriculture.

VALUE OF PRODUCE

While most items have a set price through the *GURPS* system, the precise value of agricultural produce is something that is left, to some extent, up to the GM in *Low-Tech Companion 3*. This is in large part because the price of agricultural produce – particularly grain – was enormously variable, even relative to other commodities. Although long-term inflation was very low through much of history, prices for agricultural products in any given year could shift in a wide range around a median value as a result of local weather conditions (early and late frosts, too much or too little rain, etc.), unusual insect activity, fungal blights, and so on. This effect would be particularly evident in the most primitive and most fragmented societies. Improved shipping and marketing efficiency

in more technologically advanced (or simply politically and economically stable) regions – for example, settled periods for China and the Roman Empire, later Medieval England – could go some way toward flattening out purely local problems, but regional and national productivity and prices were still subject to variation as a result of overall weather patterns. Other environmental factors have a differential impact on crops as well, though on levels of detail *Low-Tech Companion 3* doesn't go into. For example, wheat and barley don't grow as well in cool climates as oats and rye, making them less common and therefore relatively more expensive in such areas.

Cultural preference is another significant factor. For instance, beef was a preferred meat in parts of western Europe but despised in much of India, where chicken was a prized meat (at least among meat-eaters). Western cheeses would be thrown out in the Far East, and the pork so dearly loved in China would be dreaded by many in the Muslim world and ancient Israel. All of this has an impact on the prices of any given type of produce, and makes it difficult to speak of even a *typical* price of, say, a pound of pork at a given TL, as opposed to in a particular place or time.

Yet another factor to consider is overhead to bring goods to market. What a pound of grain sells for depends on where you are. The charge for agricultural produce, particularly grain, at the point of sale in town can

easily be twice what the farmer was paid for it in the countryside. *GURPS Low-Tech* prices items for the likely point of sale to adventurers, which is in town. The suggested fee of \$1 per pound for grain in *Low-Tech Companion 3* is a sale price to an adventurer feeding his horse at a stable or other urban establishment. The farmer who sold it likely gets \$0.50 per pound, with the rest going to carters, merchants, and/or mill owners along the way. Theoretically, the prices of other goods should be altered as well, depending on whether they're sold in the city or the countryside, but the cost-to-weight ratio for most goods is such that the price increase usually becomes a fraction of the base price, not a multiple.

Why Wasn't This in *Low-Tech*?

Some of this material was cut from *Low-Tech Companion 3*, and some of it never even made it into the initial manuscript. The reasons why break down into two categories:

Space. A great deal could be written on the topic of low-tech agriculture. Indeed, libraries could be filled with the books already written on the topic. However, you have to stop somewhere. The focus was on individual survival and the most widespread subsistence crops, extending the hunting and gathering rules into the Neolithic and beyond. Things like group efforts and money-making crops, though certainly interesting, didn't make that particular cut.

Accuracy. Material in *GURPS Low-Tech* and its companions is, to the best of our ability, drawn from historical literature and scholarship. However, the sources used provided more coverage on some subjects than others. Some of the figures presented in this article are notably more speculative than those making the first cut. If you find yourself thrown through a time warp, don't count on us for quotes on the price of sugar!

Many schools also teach parrying blowgun missiles with the off-hand, using the darts as knives or thrown weapons, and making the styles signature jade blowguns.

Skills: Acrobatics; Blowpipe; Blowpipe Art; Blowpipe Sport; Breath Control; Jumping.

Techniques: Acrobatic Stand; Breakfall; Evade; Feint (Acrobatics); Jump Kick (Acrobatics); Kicking (Acrobatics); Retain Weapon (Blowpipe); Spinning Kick (Acrobatics).

Cinematic Skills: Blind-Fighting; Flying Leap; Power Blow; Pressure Points (Blowpipe); Pressure Secrets (Blowpipe); Zen Archery (Blowpipe).

Cinematic Techniques: Flying Jump Kick (Acrobatics); Hand Catch (Parry Missile Weapons); Pole-Vault Kick (Acrobatics); Pressure-Point Strike (Blowpipe); Roll With Blow.

Perks: Breath Mastery (p. 28); Cotton Stomach; Iron Pipe (p. 28); Pipe Grip (p. 28); Skill Adaptation (Acrobatic Feints); Skill Adaptation (Acrobatic Kicks).

Optional Traits

Skills: Armory (Missile Weapons); Artist (Sculpting); Fast-Draw (Arrow); Knife; Parry Missile Weapons (Off-Hand); Stage Combat; Thrown Weapon (Dart).

Pipe-Stalking

7 points

A martial art for small races, pipe-stalking relies on skilled breath control, stealth, and the use of poisons to take down small prey and larger enemies. Pipe-stalkers do not train for direct combat – against most larger humanoid, that means they've already lost!

An ideal fight is one in which the pipe-stalker silently gets within range of a foe, Aims for several rounds or until the foe's back is turned, and then performs an All-Out Attack (Determined) at an unarmored portion of the body, using a poisoned dart. He then remains hidden (if possible) or flees (if not), and waits for the poison to work its way through the opponent's system. In the least ideal fight, the target is armored, and the pipe-stalker follows and waits until the armor comes off. Mythological pipe-stalking heroes are said to have hunted their enemies for years!

The legendary masters of pipe-stalking are practically invisible and silent, can penetrate armor, and can target nerve clusters in larger opponents to stun or even kill them.

Skills: Blowpipe; Breath Control; Camouflage; Stealth; Survival; Tracking.

Cinematic Skills: Blind-Fighting; Invisibility Art; Light Walk; Mental Strength; Power Blow; Pressure Points (Blowpipe); Pressure Secrets (Blowpipe); Zen Archery (Blowpipe).

Cinematic Techniques: Pressure-Point Strike (Blowpipe).

Perks: Breath Mastery (p. 28).

Optional Traits

Skills: Fast-Draw (Arrow); Hypnotism; Meditation; Mind Block; Physiology (for various large humanoid races); Poisons; Running; Swimming.

Warstaff

5 points

Warstaff is a martial-arts style for wizards. Practitioners are known for their *warstaves*, blowguns sturdy enough for use as staves, and for the spell-bearing darts they use to hit opponents at range.

Practitioners favor long-ranged attacks with Spell Arrow-enhanced darts. Up close, the art focuses on disabling, knocking down, or shoving away the opponent so that the wizard can gain some distance for spell-casting or using the blowgun. The combatant typically favors Defensive Attack (occasionally All-Out Defense if allies are likely to assist), Sweep, and Push Kick.

This style is practical and lacks much in the way of legendary abilities. Some masters have been said to be able to deflect almost anything with their blowguns, however.

Skills: Blowpipe; Brawling; Breath Control; Staff.

Techniques: Close Combat (Staff); Counterattack (Staff); Disarming (Staff); Feint (Staff); Kicking; Knee Strike; Push Kick; Retain Weapon; Stamp Kick; Sweep (Staff); Targeted Attack (Staff Swing/Leg).

Cinematic Skills: Mental Strength; Parry Missile Weapons (Staff); Precognitive Parry; Push.

Cinematic Techniques: Fighting While Seated; Grand Disarm; Timed Defense.

Perks: Form Mastery (Staff/Large Blowpipe); Pipe Grip (p. 28); Sure-Footed (Uneven).

ABOUT THE AUTHOR

Thomas Weigel lives in Austin, Texas with his wife and two cats. He has edited and indexed various books for Steve Jackson Games, but usually made his Dodge roll against the writing bug. Unfortunately, the bug got a blowgun.

Stalking is the chief hunting technique, both for arboreal and ground-dwelling creatures. Monkeys and large birds are usually stalked with the blowgun . . . and darts poisoned with curare (unpoisoned darts suffice for small birds).

– Michael J. Harner, *The Jívaro*

ABOUT *GURPS*

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Errata. Everyone makes mistakes, including us – but we do our best to fix our errors. Up-to-date errata pages for all *GURPS* releases are available on our website – see above.

GURPS rules and statistics in this magazine are specifically for the *GURPS Basic Set, Fourth Edition*. Page references that begin with B refer to that book.

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